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JUNE 1957

Basic Guide to Wheel Selection P. 36

Handling Conference Round-Up P. 38

DA Industrial Truck P. 67 **Specifications**

"Allis-Chalmers fork trucks are tougher and require less maintenance"

- says Chief Mechanic



"I think one reason the Allis-Chalmers trucks have outperformed the others is because they are easier to clean and service," continues Milt, the chief mechanic at Neenah Foundry Co., Neenah, Wisconsin. "I like the overhead valves and wet cylinder sleeves. I'm glad to see that they are replacing the old trucks with Allis-Chalmers trucks. This is going to make our job a lot easier."

Allis-Chalmers fork trucks are replacing other makes of trucks in the plant, because, according to J. P. Keating, vice-president, "On checking with operating and maintenance departments, we definitely feel your equipment is much better than competitive models. Design features, combined with the proved and dependable Allis-Chalmers engine, make this an outstanding industrial truck. We therefore recommend it without reservation."

Let your Allis-Chalmers material handling dealer give you the complete story on why owners, operators, servicemen — everyone likes Allis-Chalmers fork trucks. Better yet, let him demonstrate one and you'll see for yourself.

MATERIAL HANDLING DEPARTMENT, BUDA DIVISION, MILWAUKEE 1, WISCONSIN

ALLIS-CHALME

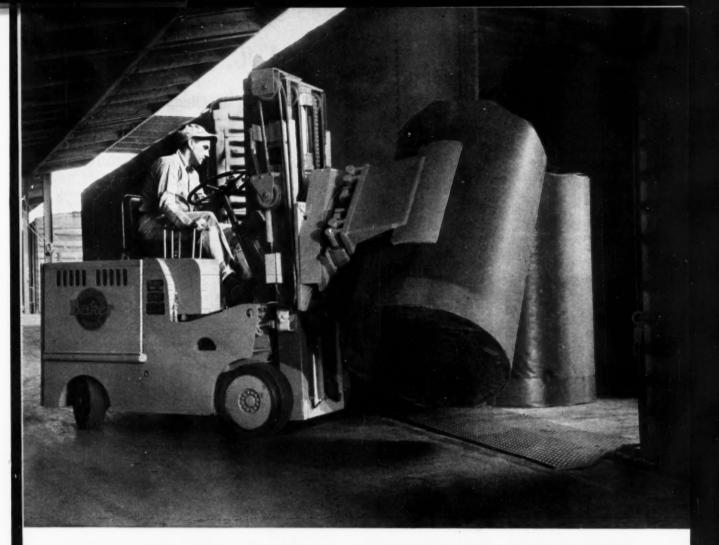


Mr. Gast, operator of one of the Allis-Chalmers fork trucks at the Neenah Foundry says: This truck must have been engineered for the driver. The parking brake is the best I've ever used. The shifting is handy, it speeds up my operation I like where the hydraulic

controls are located."



Circle No. 1 on Card. Facing Page 51, for more information



BAKER TRUCKS with proper attachments can speed many handling jobs

The revolving paper roll grab illustrated is one of many Baker attachments available for making an ordinary fork truck a special handling machine. In service at a large paper mill it cuts time and handling costs on carloading jobs. Operated hydraulically from the driver's seat, the attachment securely clamps a large paper roll, lifts it, rotates it up to 360° in either direction, transports and stacks it in any position. Baker attachments increase the utility of standard fork trucks by adapting them to special applications. They

either replace or are interchangeable with forks or rams furnished as standard equipment. Many of them are exclusive Baker developments, available only from Baker, for application on Baker trucks. Besides revolving roll clamps, there are side-shifters, swing shifters, up-enders, carton handlers, crate handlers and a wide variety of other attachments for handling almost any shape load and stacking it in any position.

If you have a special handling problem, let a Baker expert help you solve it.



Baker

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Only New HALLOWELL ERECTOMATIC. Steel Shelving



STRAIGHT-IN, STRAIGHT-OUT SHELF CHANGE. No tilting. No dismantling. No interference with any other shelf.



INDEPENDENT SHELF POSITIONING. Each shelf can be repositioned individually in seconds.



FULL USE OF SHELF AREA. No tees or angles, and beaded posts save valuable space.



common side panets and posts save material between adjacent units in a rack. Back and side panels are one-piece.



BEADED POSTS AND FLANGED SHELVES prevent snagging of clothing or stored goods, protect workers.



FULL DEPTH SHELF SUPPORT. No buckling possible. Reinforcements can be added when required.



4 CLASSES OF SHELVES. Regular, medium, heavy and extraheavy construction meets all load requirements.

Circle No. 2 on Card, Facing Page 51, for more information

cuts assembly time, permits fast repositioning of shelves — gives you these plus features

No matter what type of shelving you need-open, closed, bin units, ledge units, counters or cabinets-new Hallowell ERECTOMATIC® steel shelving makes the job easy. The unique built-in locking device*—developed by SPS—speeds assembly and rearrangement of shelves. To position a shelf, slide it into place on the shelf supports, press the locks, and the shelf is locked. To reposition a shelf, release the locks, pull the shelf straight out, slide it straight in on its supports at the new location, and press the locks. It takes only seconds to do the complete job. Made of prime steel, phosphate coated, and finished in SPS green baked-on enamel-other colors are available. Hallowell ERECTOMATIC steel shelving is stocked by leading industrial distributors and shop equipment dealers. For complete information, see the one nearest you. Or write Hallowell Shop Equipment Division, STANDARD PRESSED STEEL Co., Jenkintown 77, Pa.

*Patent applied for



TWO MEN ASSEMBLED new Hallowell ERECTOMATIC steel shelving in just over 10 minutes. Closed unit was 36 in. wide, 18 in. deep, 7 ft. 3 in. high, complete with seven shelves. Standard models of other design required 13-55 min. Table shows test results.

Brand Time to Assemble (Min		Units Per Hou					
Erectomatic	10.42	5.75					
A	13.23	4.53					
В	14.24	4.21					
C	16.30	3.68					
D	18.12	3.31					
E	25.03	2.40					
F	55.03	1.09					

HALLOWELL SHOP EQUIPMENT DIVISION

STANDARD PRESSED STEEL CO.



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ROBERT E. McKENNA, Publisher George Post, Production Manager

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Executive, Editorial & Advertising Offices: Chestnut & 56th Sts., Philadelphia 39, Pa. SHerwood 9.7000







Accepted as controlled circulation publication at Philadelphia, Pa. Copyright 1957 by Chilton Company. Published monthly. Subscription rates: U. S. \$5 per year; Canada \$5.50 per year; foreign Countries, \$6 per year. Single Copies 50c each, except February Directory Number-\$4 per

DISTRIBUTION AGE

Vol. 56, No. 6

ESTABLISHED 1901

June 1957

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Taking the things of America where they're needed... when they're needed





A STEP AHEAD OF TOMORROW—Keeping tab on the ever-changing needs of the shipping community is Step Number One in our total transportation service. Translating those needs into workable methods, practical equipment follows. Often, as in the case of the versatile Mobilvan, our research people find that what they'd thought would be right for "tomorrow" is ready to go to work for you today.

Marketing men tell us that new distribution patterns are firming up fast. Say the word and we'll provide the transportation you need to capitalize on that fact—today and tomorrow.

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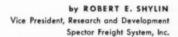
between more than 20,000 industrial and commercial markets in 48 states

SPECTOR FREIGHT SYSTEM, INC.

CHICAGO 8

TERMINALS IN PRINCIPAL CITIES

The World's Largest Research and Development Staff ... the Two of Us!





A FEW WEEKS BACK one of our nation's leading traffic executives approached me with the question, "Bob, just what's all this research and development business you people are talking about . . . what's it mean to us?" We'd been working the better part of that morning on a program for the planned loading of small shipments off his assembly line for multiple destination. I had remarked that our research and development staff was certain to be interested in the methods we were in process of working out.

It's interesting to observe how many people regard the term *Research and Development*. Almost to a man they visualize laboratories, test tubes, complicated measuring devices, long columns of statistics. Too few consider their own role and limitless potentials in participating in the research process, in the development of more efficient solutions to problems. For, is it not a fact, that only in the mutual investigation and satisfying of customer wants can both the buyer and the seller (*The Two of Us*...) benefit and profit.

For nearly 50 years now, since the very inception of for-hire transportation, American businessmen have regarded the common carrier—rail, truck, water, and air alike—as a public utility. Fixed rights, fixed equipment, fixed rates. Find the carrier most suitable to your immediate needs, employ his services. You had his routing guide, a tariff and a telephone-you took what was available. From time to time, a carrier, or even a mode of transportation, would come up with a new type of equipment or a new method of handling freight. "We have it . . . try it . . . you'll like it." In rare instances would the customer be surveyed on the need for or construction of the new technique or equipment. Rarely, too, was his counsel sought in evaluating its performance.

As post World War II shortages continued to prevail and as the freight business continued abundant, the transportation industry, unlike others, continued reluctant to institute broad programs for experimentation, for research and development. The motor carrier industry itself, despite its progressive tendencies in most service areas, followed the crowd. No doubt the very nature of its small

enterprise unit and consequent limited capital was the major deterent to its pioneering in this vital field.

Less than 10 years ago, when the first drafts of the Spector—Mid-States expansion program were being written, it was apparent that no significant growth or prosperity could be accomplished without a comprehensive research and development effort. In charting the firm's now famous Customerized philosophy of organization and service, management decreed that the entire physical and functional facility would be built upon the "researched" needs of the customer, developed and evaluated in his terms, too.

To construct a freight transportation service that would best fulfill the growing need for a mass transportation service at a price the mass consumer, directly or indirectly, could afford to pay, required full knowledge of those needs. No guesswork, no speculation. Out of the Customerized concept was born a number of unique market research programs: foremost, the Customer Conference, where each month a score or more of shippers gather at each Spector-Mid-States terminal to discuss problems of mutual concern. Customer expression is further acquired through field interview by salesmen as part of their contact responsibility, by written surveys taken from time to time on specific matters. In the course of such customer research, Spector-Mid-States management has uncovered many facts, suggestions and attitudes which have markedly influenced the shape and nature of the company's philosophies, facilities and practices. No suggestion is too small or too remote for consideration. No idea, however "Blue Sky" it may appear, is casually regarded. We've found, too often, that today's impossibility can well become tomorrow's service advantage.

The Relay System of highway transport, for example, was an idea that would "never work." Modular, flexible container (Mobilvan) units would "neverwork." (Hadn't they been tried and failed in the early 1900's!) When customers said they liked the idea, we called in our top suppliers and found today's technology very much equal to the assignment of making them work. Advance electronic billing—a dream 5 short

years ago. Preliminary closed-control tests promise system-wide use before long.

R and D doesn't always apply to the entire market, in fact, rarely does. If a customer requires a special kind of temperature control and we feel it can be developed to our mutual profit, into development it goes. If certain regions call for an unbalanced supply of opentops and flatbeds, we look into the design of a convertible trailer which might do both jobs. If higher capacity trailers are in demand, we work with our trailer makers (and customers) to bring out the most practical unit. And from each of these special requirements usually comes a Spector-Mid-States innovation which, often as not, finds its way into our general service.

Many worthy ideas originate with our suppliers: a new diesel engine, a new sliding 5th wheel, a new dock rack for the handling of small shipments, a new driver uniform design—again, the customer's reactions and evaluation are called upon to determine whether the field tested idea, technique or equipment should find a place in our general service . . . in his service.

Yes, today's traffic executive is keenly aware of the responsibility he bears in the determination of his company's profit ratio. We of the transportation industry share this responsibility with him. And only through the continuing study of his problems and opportunities, through the continuing development of new facilities, new equipment and new ways of doing things, can we most directly help him fulfill his one vital job objective—efficient total distribution of his company's products.

Robert E. Shylin was named to head the Research and Development Division for Spector—Mid-States in early 1957. Formerly Vice President, Terminal Operations, at Mid-States Freight Lines before the firm's merger with Spector Freight System, Inc., Shylin has been associated with motor transportation for more than 20 years, most of them in customer relations capacities. He has served as president of the Chicago Transportation Club and Chairman of the Editorial Committee of the Associated Traffic Clubs of America. Shylin, 44, his wife and their two daughters reside in Oak Park, Illinois.

Our shippers want volume...

We give them both with Trailmobile LO-LEVEL vans

Mr. J. W. Jackson, Terminal Manager, and Mr. T. L. McNatt, Sales Representative, inspect one of Bowman's new Lo-Level trailers at the company's Atlanta Terminal.



.. <u>plus</u> straight-floor loading!

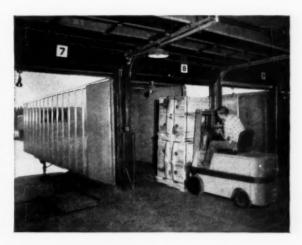


"Drop frame capacity in a straight floor van...

that's the feature that sold me on Trailmobile's new Lo-Level trailers," says Mr. Ralph Bowman, President of Bowman Transportation, Incorporated.

"Lo-Level's capacity is all functional capacity because the straight floor feature removes the drop floor "bottleneck" that so often leads to loading problems and wasted space.

For example, in the case of one shipper's product, we are now loading up to 2000 more pounds in Lo-Level vans than we were formerly able to get in drop floor vans. And we load it faster because there's no time lost in figuring how to pack freight around the "drop."



"Lift truck loading from front to rear...

Loading and unloading at our terminals or at shipper's docks is easier, faster and less costly when we're using Lo-Levels. With 98½ inches of loading height from front to rear, lift trucks can go all the way in. There's no double cargo handling at the front...it's a one man operation all the way. And since we are principally a package goods carrier—and our shippers use lift trucks extensively—this feature becomes a cost-saving benefit to ourselves and our customers.

"LO-LEVEL gives us all the advantages of CID* too!

When Bowman Transportation ordered 25 Lo-Level vans they were able to specify specific CID components that best suited the needs of their operations. For example, they selected rugged, exposed post side panels for low maintenance . . . extruded aluminum floors for weight saving and lift truck loading . . .

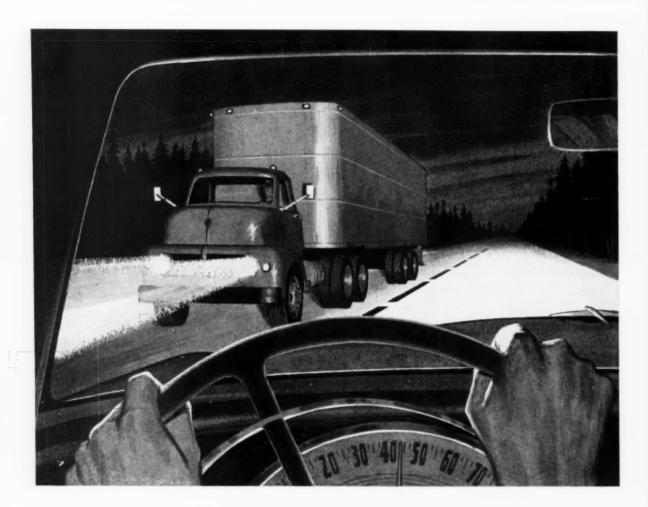
plastic skylites for easier, safer loading . . . and 18" corners to insure greater cab clearance and eliminate tractor interchange problems. In every respect these trailers are custom-fitted to the job . . . a big operating advantage possible only with Trailmobile CID.



*Customer Individualized Design

TRAILMOBILE INC.

Cincinnati 9, Ohio · Berkeley 10, California · Springfield, Missouri · Longview, Texas



Here Comes A New Way Of Life

That lonely truck moving through the night is a symbol of the way we live today. What you see, of course, is a modern motor vehicle. What you don't see are the fresh and packaged foods it's carrying to some suburban shopping center, there to be unloaded before opening time tomorrow . . . It's just one of many trucks you'll probably meet before you get where you're going — and one of millions continually at work across this country on the everlasting job of moving increasing mountains of merchandise of every description to where

they're needed . . . Actually it's a new way of life, this truck you're passing in the night, for with their flexibility and speed, their ability to go wherever there are roads, trucks have changed our whole pattern of living. Today, because of trucks, we can live and shop wherever we please — and mills and plants can locate just about anywhere, too . . . America is growing at a rate and in directions undreamed of a generation or so ago and made possible to a large extent by the trucking industry, expanding to serve you.



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American Trucking Associations, Inc., Washington 6, D. C.

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Circle No. 4 on Card, Facing Page 51, for more information

How Air Freight creates new markets for Nature's most exotic perishables



Orchids of Hawaii Sales Promotion Manager, George Matsuda, inspects Cargoliner shipment of tropical flowers and foliage.

Modern business firms are generally aware of the speed advantage of Air Freight. But few have demonstrated its marketing efficiency more dramatically than Orchids of Hawaii, New York.

"People are amazed that real orchids can be grown, corsaged, packed and shipped by air to destinations thousands of miles away for as little as 15¢," says Orchids of Hawaii President, Kei Yamato. "Air transportation has opened vast new markets for the 50 items in our line."

Even non-perishables go Air Freight. "By surface carrier, our money would be tied up 3 to 4 weeks," explains Mr. Yamato. "Also, via United, we ship from Honolulu direct to our four U. S. distributing centers."

More and more firms find economic justification for regular shipments via Air Freight in values not always apparent in the tariff book. And United offers special advantages: Reserved Air Freight, door-to-door service, the only all-DC-6A Cargoliner fleet. Ship United!

Examples of United's low Air Freight rates

					per	10	0 pounds*
CHICAGO to CLEVELAND	,						\$4.78
NEW YORK to DETROIT							\$5.90
DENVER to OMAHA							\$6.42
SEATTLE to LOS ANGELES .							\$9.80
PHILADELPHIA to PORTLAND							\$24.15
SAN FRANCISCO to BOSTON .							\$27.00

*These are the rates for many commodities. They are often lower for larger shipments. Rates shown are for information only, are subject to change, and do not include the 3% federal tax on domestic shipments.

Peritaria San Francia Condition Cond

Door-to-door service

SHIP FAST...SHIP SURE...SHIP EASY

For service, information, or free Air Freight booklet, call the nearest United Air Lines Representative or write Cargo Sales Division, United Air Lines, 36 South Wabash Avenue, Chicago 3, Illinois.



NITLeague Opposed Changes

The National Industrial Traffic League on May 9 submitted a statement to the Senate Subcommittee on Surface Transportation in opposition to S. 1677. This controversial measure would change the definition of private and contract carriers.

John C. Allen, League spokesman, said, "The League is opposed to the provisions of this Bill as being entirely unnecessary to accomplish the desired results, and as being objectionable from the standpoint of the possible effect on private carriage."

National Transportation Week Events Spotlight The Industry's Role in Our National Economy

The May 12-18 observation of National Transportation Week spotlighted, over and over again, the importance of a dependable transportation network to our national economy. The "week" was sponsored by the Associated Traffic Clubs of America. It was marked by special programs throughout the country on local, state, regional, and national levels.

The fourth annual Material Handling Training Conference is scheduled from June 16-29 at the Industrial Management Center, Lake Placid, N. Y. Typical of the many special events was the "kick-off" program conducted May 13 in Richmond, Va.

Highlighting the affair was the presentation of a scroll to Governor Thomas B. Stanley, of Virginia, by ATC President Frank L. O'Neill in appreciation of the governor's efforts toward the betterment of transportation. A similar award was presented to Governor Luther Hodges of North Carolina by L. E. Galaspie, ATC executive vice president.

Representative John Bell Williams, of the House Interstate and Foreign Commerce Committee, and Harold I. Baynton, chief counsel of the Senate Interstate and Foreign Commerce Committee, also were honored. Carrier groups were represented by Col. R. S. Henry, Association of American Railroads; Judge E. H. Williams, Jr., Virginia Highway Users Association; Theodore Tower, Brooks Transportation Co., and Yates Catlin, for the American Waterways Operators, Inc.

On hand was an exhibit of unusual transportation equipment, including an old Conestoga wagon used to provide transportation for Braddock's ill-fated expedition from Alexandria and Winchester, Va., to Fort Cumberland.

(Please Turn Page)

Commerce Department Consultant



Vern I. McCarthy, Jr. (right), vice president of Vulcan Containers Inc., Bellwood, Ill., has been named a consultant to the Business and Defense Services Administration, U. S. Department of Commerce. He recently completed six months' duty as deputy director of the Containers and Packaging Division in the administration. Upon completion of McCarthy's active duty in Washington, H. B. McCoy (second from right), BDSA administrator, presented him with a flag which flew from the Capitol. Looking on are Frederick H. Mueller (left), assistant secretary of commerce for domestic affairs, and Rep. Harold R. Collier, of Illinois

Chuting the News . . .

(Continued from Preceding Page)

Complete Re-evaluation of Regulatory System Called for by Transportation Institute Speaker

Edwin G. Nourse, economist and author, last month called for a complete re-evaluation of the nation's transportation regulatory system, including the freight rate structure. Dr. Nourse, who is former chairman of the Council of Economic Advisers, addressed his remarks to more than one thousand shipper and carrier executives attending the National Transpor-

tation Institute, in New York. The program was sponsored by the Transportation Association of America in observance of National Transportation Week.

Suggesting a coordinated national transportation network, Dr. Nourse said, "The time may have arrived for re-examining the whole regulatory picture with a view to giving greater scope to the competitive motive and the flexibility of locally responsible policy-making."

Transportation in the Changing World was the program theme. Representatives of the four major modes of transportation outlined their activities in keeping with the theme. Speakers included Carter L. Burgess, president of Trans World Airlines; J. L. S. Snead, Jr., president of Consolidated Freightways; A. E. Perlman, president of the New York Central System, and Millard G. Gamble, president of Esso Shipping Co.

Burgess outlined his industry's fight to lessen government competition by curtailing activities of the Military Air Transport Service. He also spoke out in favor of the six per cent fare increase sought by the airlines.

Snead, calling for an integrated approach to transportation, hinted that a revision of the rate structure might be necessary to bring about such integration. Praising the current ICC program, he suggested a joint approach to problems through inter-carrier cooperation.

Speaking for the railroad industry, Perlman also took aim on the rate structure. He asked for a system overhaul, claiming that the present structure is responsible

for many of the railroads' uneconomical freight operations.

Gamble confined his remarks to the oceangoing tanker situation. He traced the 70-year history of the world's tanker fleet to its present day status of 2300 vessels with a carrying capacity of 41 million deadweight tons.

Also on the program was a quiz team of three traffic managers. Included were H. H. Huston, general traffic manager of American Can Co.; Donald G. Ward, assistant vice president of Olin Mathieson Chemical Corp., and John C. Allen, general traffic manager, Sears Roebuck & Co.

Container Operations Up

Container operations for 1956 reached a new peak, exceeding the previous record volume of 1955 by more than 2 per cent in physical volume and approximately 6 per cent in dollar volume, according to the new "Containers and Packaging Industry Report." The Report was issued last month by the Containers and Packaging Division of the Business and Defense Services Administration, U. S. Department of Commerce.

Record operations for 1956 resulted from new highs for converted flexible packaging products, glass containers, metal cans, steel shipping pails, paper milk containers, corrugated shipping containers, and set-up paper boxes. Activities decreased from 1955 for closures, folding paper boxes, nailed wooden boxes, fluid milk shipping containers, and metal ice cream cans.



Western Pacific went modern in the recent "gold spike" driving which joined the system to the Oakland Terminal Railway. Notables used a new automatic spike driver for the ceremony. Mayor Clifford Rishell, of Oakland, drove the spike while WP Vice President H. C. Munson looked on

Personnel Called Top Problem in Packaging and Handling

Recruiting and training personnel is the number one job problem for both consumers and suppliers in the industrial packaging and material handling field, according to a recent survey by the Society of Industrial Packaging and Materials Handling Engineers.

The "hottest topic" in the material handling field is unitization, palletization, and group shipment. The topic in the industrial packaging field is new products—what's available and how to use them.

The SIPMHE survey went to 1600 packaging and material handling engineers, and asked for the top three job problems and the hottest topics.

After personnel the job problems most often mentioned by users were package design and warehousing. The second and third most mentioned problems in the vendor replies were new product design and getting through to customers.

In the material handling hot topic list, warehousing and bulk handling-bulk packaging are close behind unitization. In the packaging hot topic list cushioning and cushion packaging and plastics are second and third.

Motor Freight Claim Conference



Members of the Western Motor Freight Claim Conference met recently in Denver to review claims procedures, handling methods, and packaging techniques. At the head table are (left to right) Donald Blair, Denver-Chicago Trucking Co.; George Kelly, administrative assistant to Denver's Mayor Will Nicholson; John M. Miller, head of the ATA Freight Claims Section; Grant D. Nelson, Ringsby Truck Lines; and Jack Stout, manager, California Trucking Association's Weighing and Inspection Bureau

Retail Dry Goods Traffic Group Re-elects Robert H. Smith

Robert H. Smith, of John Wanamaker, early last month was reelected president of the Traffic Group of the National Retail Dry Goods Association. The Association's 36th Annual Conference was conducted May 6-8 in Chicago.

Also re-elected were Jack A. Serber, Hecht Co., vice chairman, and John J. Kane, of Miller & Rhoads; John W. McDaniel, of Loveman, Joseph, and Loeb, and S. C. Tetley, of Emery, Bird, Thayer, as directors.

Leonard Mongeon, Group manager, outlined the traffic manager's professional status in an address entitled "Problems Ahead for Retail Traffic Management." He said results have been encouraging in the fight for management recognition, but much hard work still lies ahead.

Frank Greenwall, president of National Starch Products, and A. Douglas Murphy, president, Packaging Institute, have announced establishment of a scholarship in Packaging Engineering at Michiagn State University.

J. T. Jenkins New Chairman of Trucking Safety Council

Joseph T. Jenkins, of Mason & Dixon Lines, Inc., was elected chairman of the ATA's Council of Safety Supervisors at that group's Annual Meeting in Dallas last month. Bert L. Wheat, of Eastern Express, Inc., was elected vice chairman.

Regional chairmen named were: R. F. Varner, Coastal Tank Lines, Eastern; Horace Grant, Deaton Truck Lines, Southern; G. L. Smith, Motor Cargo, Inc., Central; and A. S. Lombardi, Western Truck Lines, Ltd., Western.

The Trailmobile Trophy, top prize in the ATA's National Truck Safety Contest, was awarded to Dan Dugan Oil Transport Co., of Sioux Falls, S. D.

-DA-

The Civil Aeronautics Board is opposing a five per cent increase in North Atlantic airline fares, requested by the International Air Transport Association. The move is opposed because it represents a type of price-fixing which the board considers objectionable. The CAB claims that the proposal originated with the Association staff rather than with one or more of the airlines.

Philadelphia Man New Chairman of AAR Purchases & Stores Div.

John S. Fair, Jr., of the Pennsylvania Railroad, last month was elected chairman of the Purchases & Stores Division of the Association of American Railroads. Ottis O. Albritton, of the Illinois Central Railroad, was named vice chairman.

Chosen to fill vacancies on the AAR Division's General Committee were J. T. Healy, Louisville & Nashville Railroad; V. E. McCoy, Milwaukee Road, and G. L. Mitchell, of the Atlantic Coast Line.

Also, F. W. Pettit, Western Maryland Railway; A. L. Prentice, of New York, New York Central System; E. M. Pulsipher, Great Northern Railway, and W. G. Rathert, of the Missouri Pacific Railroad.

Improved methods for handling the railroads' requirements for nearly \$2 billion worth of fuels, materials and supplies in 1957 were discussed at the Chicago meeting. More than 1,500 railroad officials and suppliers from the United States, Canada and Mexico attended the three-day session.

Lawrence A. Pomeroy, Jr., former traffic manager of National Malleable and Steel Castings Co., Cleveland, Ohio, has been promoted to assistant manager of the International Division. Ellsworth H. Sherwood, assistant vice president, was named vice president in charge of the international division. Arthur D. Ott has been promoted to traffic manager.

Cost Estimate of Seaway Project

American taxpayers will have to dig deeper than they expected to pay for construction of the St. Lawrence Seaway.

At 1952 prices, it was estimated the U. S. share of the cost of deepening the waterway would be \$88-million. Administrator Lewis G. Castle has now told Congress the cost will be \$140-million. Of the increase, \$20-million is caused by inflation, \$10-million by design changes and \$36-million for added construction items.

(Please Turn to Page 90)

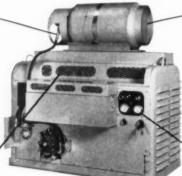


Ready-Power LPG-Electric Power Unit for Sit-Down Trucks

MODEL HA-3 FOR 4000-6000 LB. FORK TRUCKS

Now, get the advantages of full-time LPG-electric power for any electric, sit-down fork truck, regardless of make or model. Compact Ready-Power model HA-3 accommodates all seating arrangements . . . assures remarkably low-cost operation . . . minimizes objectionable fume problems. Compact LP-Gas cylinder is mounted on top of engine-generator housing for quick, easy interchangeability. Hinged cover and side plate give easy access to engine accessories; removable end plate permits service of generator. LP-Gas components are listed by Underwriters' Laboratories and comply with Factory Mutual recommendations. Write today for full information.

Flexible LP-Gas fuel lines withstand vibration ... quick-disconnect coupling assures safe refueling.



LP-Gas cylinder is standard I.C.C. -33½-lb. or 43½-lb. capacity. A.S.M.E. tank is optional.

Recessed housing accommodates seating arrangement for all electric sit-down fork trucks Instrument panel is within easy reach of operator, protected against damage.

READY-POWER

The READY-POWER Co., 3821 GRAND RIVER AVE., DETROIT 8, MICH.

Manufacturers of Gas and Diesel Engine-Driven Generators and Air Conditioning Units; Gas and Diesel-Electic Power Units for Industrial Trucks
Circle No. 5 on Card, Facing Page 51, for more information

Coming Events

June 13-15—The Instrument Society of America, Third National Symposium on Instrumental Methods of Analysis, University of Chicago.

June 16-29 — Material Handling Training Conference, Fourth Annual Meeting, Industrial Management Center, Lake Placid, N. Y.

June 18-20—Freight Claim Council of the ATA, Annual Meeting, Hotel Wisconsin, Milwaukee, Wis.

June 19-20 — ATA Executive Committee, ATA Headquarters, Washington, D. C. June 24-26—National Wooden Box Assn.,

June 24-26—National Wooden Box Assn., Annual Summer Meeting, Lake Placid Club, Lake Placid, N. Y.

July 15-17—Truck Trailer Mfrs. Assn., Summer Meeting, Homestead Hotel, Hot Springs, Va.

July 15-19—American Management Assn., Inc., Management of the Packaging Operation Clinic, Colgate University, Hamilton, N. Y.

Aug. 30-Sept. 13—Ninth Pan American Railway Congress, Buenos Aires, Argentina, S. A.

Sept. 9-13—Instrument Society of America, Instrument-Automation Conference and Exhibit. Cleveland.

Sept. 15-18—Produce Packaging Assn., Inc., Seventh Annual Conference and Exposition, The Shoreham Hotel, Washington.

Sept. 17-18—Central Motor Freight Assn., Annual Convention, Conrad Hilton Hotel, Chicago.

Sept. 22-26—American Transit Assn., Annual Meeting, Sheraton-Mt. Royal Hotel, Montreal, Quebec, Canada

Sept. 30-Oct. I—The Material Handling Institute, Inc., Joint-Industry Fall Meetings, Greenbriar Hotel, White Sulfur Springs, W. Va.

Sept. 30-Oct. 4—Canadian National Material Handling Show & Conference, Show Mart, Montreal, Quebec, Canada.

Oct. 1-3 — Third Joint Military-Industry Packaging & Materials Handling Symposium, Fort Lee, Va. Oct. 2-8—Regular Common Carrier Con-

Oct. 2-8—Regular Common Carrier Conference, ATA Annual Meeting, Conrad Hilton Hotel, Chicago.

Oct. 6-9—American Trucking Assn., Executive Committee, Conrad Hilton Hotel, Chicago.

Oct. 6-11—American Trucking Assns., Annual Convention, Conrad Hilton Hotel, Chi-

Oct. 8-10—Association of American Railroads, Chicago, III.

Oct. 14-16—Truck Body & Equipment Assn., Annual Meeting, Atlanta-Biltmore Hotel, Atlanta, Ga.

Oct. 28-31—SIPHME National Industrial Packaging & Handling Exposition, Short Course and Competition, Convention Hall, Atlantic City, N. J.

Shippers Advisory Boards

June 12-13—Southeast, Memphis, Tenn. June 13-14—Pacific Coast, Los Angeles. June 19—Ohio Valley, Indianapolis, Ind. June 20-21—Pacific Northwest, Seattle, Wash. June 27-28—Great Lakes, Charlevoix, Mich.

Shipper-Motor Carrier Conference

June 12—Ohio Shipper-Motor Carrier Conference, Inc., Spring Meeting, Deshler Hilton Hotel, Columbus, Ohio.

MEN IN THE NEWS

Traffic

Frank R. Markley, vice president—assumed responsibility for the firm's transportation functions, Sun Oil Co., Philadelphia, Pa.

Carl P. Greeley, Traffic Dept. head for National Distillers & Chemical Corp. —elected vice president.



Richard A. Gosline—new Western traffic manager, Nilco Laminated Products, Inc., Tacoma, Wash.

R. W. Schelper—promoted to transportation and distribution manager, Pillsbury Mills, Inc., Feed Div., Clinton, Iowa.



Joseph L. Miller — appointed general traffic manager, Birdsboro Steel Foundry & Machine Co., Birdsboro, Pa

William A. Weber—named general traffic manager, Aluminum Co. of America, Pittsburgh, Pa.

Clarence H.
Gerling — named
traffic manager,
Liggett & Myers
Tobacco Co.,
Durham, N. C.



John S. Boidock—appointed general traffic manager, Pharmaceuticals, Inc., Newark, N. J.



John W. Sticklen — new traffic manager, Butler, Pa., Works of Armco Steel Corp.

Transportation—Air

H. J. Chase—elected vice president and base manager, Lockheed Aircraft Service-International, Inc., New York International Airport.

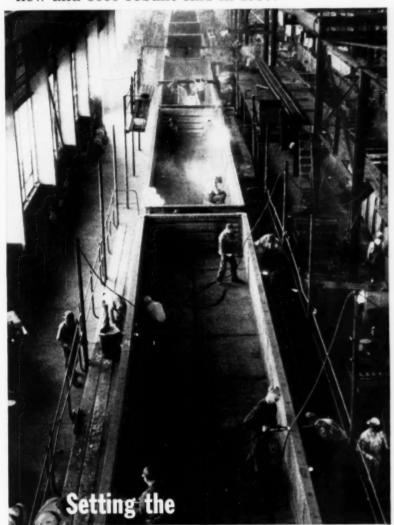
Thomas D. Toberty—appointed director of personnel, Slick Airways, Dallas, Tex.

Four new regional flight managers have been named by American Airlines. They are: G. Ward Hobbs, Eastern; James J. Lamond, Central; Capt. W. B. Hooten, Southern and George W. Shiles, Western.

(Please Turn to Page 128)

A new freight car every hour...

to keep ahead of the nation's needs. Mo-Pac's own De Soto, Missouri shops will turn out 2000 new and 5000 rebuilt cars in 1957!



MODERN PACE in transportation



KRIEGSMAN

TRANSFER CO. PEKIN, ILL.

protects its property

Automatically..

gets better

FIRE

and

BURGLARY

protection and

SAVES \$15,000 YEARLY

Your automatic fire and burglary protection has been used in our warehouses for eleven years. It gives us that certain feeling of security, not only at night, but around the clock. We are thoroughly convinced that it affords us better protection than watchmen's patrols, with a saving of at least \$15,000 a year.

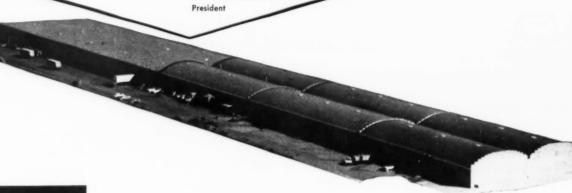
Safety of customers' goods is of primary consideration at the Kriegsman warehouses. The firm's 150,000 square feet of storage space are guarded by a combination of ADT Automatic Protection Services. Automatic sprinklers supplemented by ADT Sprinkler Supervisory and Waterflow Alarm Service summon the fire department automatically in case of fire. ADT Burglar Alarm Service silently and automatically notifies police of the presence of intruders.

Thousands of warehousemen and other business executives from coast to coast strongly endorse ADT Automatic Protection because they know that it provides greater security for property, profits, customers' goods and employees' jobs than other methods, and at less expense.

May we show you what ADT can do for you?

Whether your premises are old or new, sprinklered or unsprinklered, an ADT specialist will show you how combinations of automatic services can safeguard your property. Call our local sales office if we are listed in your phone book; or write to our Executive Office.



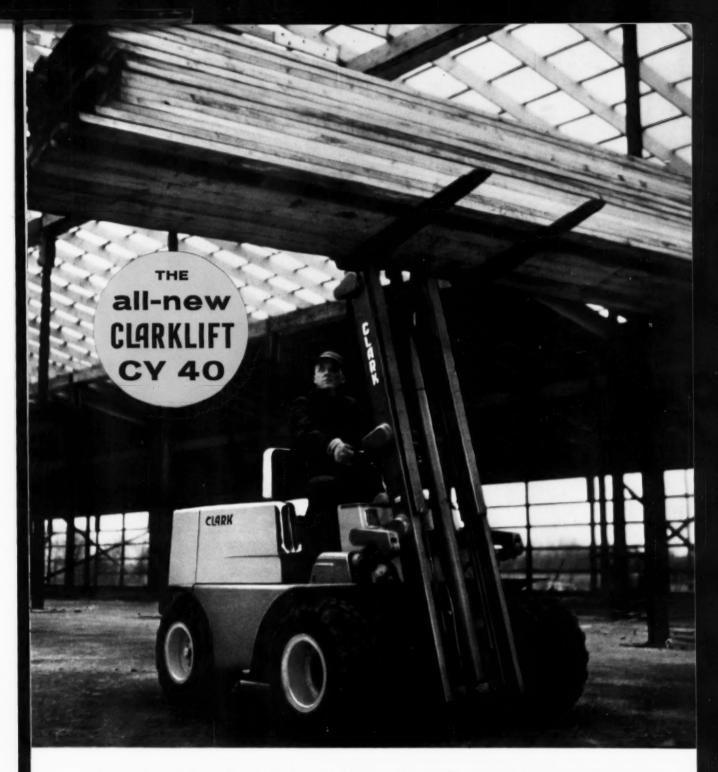




Controlled Companies of

AMERICAN DISTRICT TELEGRAPH COMPANY

A NATIONWIDE ORGANIZATION 155 Sixth Avenue, New York 13, N.Y.



A single truck with dual performance

Now for the first time, a single truck meets any terrain condition. On paved surfaces, the *Clarklift* CY 40, with *single standard tires*, is fast and maneuverable. Now change to *dual wide-profile tires*. This *same* truck now operates over mud or rough terrain with powerful traction, high stability and flotation.

As standard equipment, there's fingertip-control power shifting, and a creeper range for rough ground and steep grades. Power steering insures matchless handling ease. Even weight distribution means positive traction and gradeability.

This new 4000-lb *Clarklift* sets a new pace, regardless of conditions. Try a demonstration on your own property. Your Clark dealer will arrange it. He's listed in the Yellow Pages.

Industrial Truck Division Clark Equipment Company Battle Creek, Michigan

CLARKLIFT is a trademark of Clark Equipment Company



For long-distance moving



It's good to remember that GREYVAN means reliable GREYHOUND service!

You Have undoubtedly discovered that *people* are the biggest part of the moving problem. People who are sincerely and understandably concerned about their household treasures.

As Part of Greyhound Lines, GREYVAN has been dealing with *people* for a long, long time. We understand them. And we understand the problems of Traffic and Personnel Management, too. We know the importance—to you and to us—of *performing* what we promise to your people. Courteous and convenient service—swift, sure and safe—in packing, hauling, storing and unpacking. That's why more and more Traffic Managers advise—give it to GREYVAN... to be *sure!*



GREYVAN LINES

INCORPORATED

General Office: 57 West Grand Avenue, Chicago 10

THE GREYHOUND MOVER

LONG-DISTANCE MOVING AND STORAGE



Like having four trucks instead of one

There are four combinations of same-size drive and steer tires that make this *Clarklift* CY 40 the most versatile truck you can buy. Think of it—it's like having four trucks instead of one. Each set of tires fits a different job.

Dual wide-profile tires (shown above) at 30 pounds pressure give extra traction. Single wide-profile tires apply when overall machine width is limited. Dual standard and single standard tires apply on firmer surfaces.

Each tire combination mounts without machine modifications, thus change-outs are readily made according to the job. Clark alone offers the new high flotation wide-profile tires as standard equipment. Ask your Clark dealer about them and the new Clark-lift CY 40, the truck that's

Industrial Truck Division Clark Equipment Company Battle Creek 11, Michigan Clarklift's a trademark of Clark Equipment Company

really four trucks in one.

Circle No. 7 on Card, Facing Page 51, for more information

CLARK EQUIPMENT



Let 'em come...



Your Butler terminal can handle 'em profitably

Butler terminals are so designed that they help you handle more freight per dollar of construction. Crossdocks are post-free, truss-free—nothing blocks storage or movement of materials handling equipment.

You can have solid rows of doors installed easily and economically to spot more trucks. No extra bracing is needed because the Butler rigid frame, not the walls, carries the entire building load. Modern, curtain-wall construction is a Butler feature. Walls can be all-metal or architecturally styled of conventional materials.

As for cost, Butler construction is the lowest cost way to build well. Butler terminals are precision prefabricated to go up weeks to months ahead of traditional construction. You tie up less money and for shorter periods. Yet you get a terminal that's attractive and so designed it contributes to a highly efficient operation.

A number of trucking firms using Butler terminals have been cited by the Terminal Operations Council of the A.T.A. in recognition of a terminal designed, constructed and operated to reflect local credit on the trucking industry.

For details, call your Butler Builder listed under "Buildings" or "Steel Buildings" in the Yellow Pages. Ask to see the sound-slide film on freight terminal planning. Also get the free 12-page booklet on planning freight terminals. Or write us direct.



BUTLER MANUFACTURING COMPANY

7419 East 13th Street, Kansas City 26, Missouri

Manufacturers of Buildings • Oil Equipment • Farm Equipment • Dry Cleaners Equipment • Outdoor Advertising Equipment • Custom Fabrication

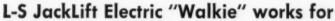
Sales offices in Los Angeles and Richmond, Calif. • Houston, Tex. • Birmingham, Ala. • Atlanta, Ga. • Minneapolis, Minn. • Chicago, Ill. • Detroit, Mich.

Cleveland, Ohio • New York City and Syracuse, N.Y. • Washington, D.C. • Burlington, Ontario, Canada

Circle No. 8 on Card, Facing Page 51, for more information

1-S ELECTRICS FOR LIFT TRUCK SAVINGS







less than \$1.15 a day!

At Mosaic Tile Company, Zanesville, Ohio . . . the L-S JackLift Electric "Walkie" gives big-truck power for hauling heavy tile loads plus easy maneuverability for safe spotting in narrow areas. And especially important is L-S working economy: complete operational costs for Mosaic's 13-truck fleet average less than \$1.15 per truck a day*!

Rugged, compact... the L-S JackLift low-lifts up to 6000 lbs... "walks" bulky loads in and out of tight quarters... handles 48" long loads in aisles less than 6'0" wide!

All controls - speed, braking, lift, direction - are located within the span of a hand in the roto-grip handle head.

Dynamic braking and timed acceleration give you faster, smoother starts and stops . . . instant control and careful inching of fragile loads.

For full time dependability and economy, L-S is your best truck buy! Get the full facts about the JackLift Electric "Walkie", and other *low-cost* Lewis-Shepard Electrics. Use the coupon below.

*Average cost for operating and maintenance, including battery charging

Here's Proof of L-S JackLift Electric Dependability

57.3% of the orders for JackLift Electrics received in the past 4 years were repeat orders from satisfied users already owning JackLift Electrics. A few are as follows:

Paper Mfgr.	44 L-S in use reordered 5
Chain Grocer	99 L-S in use reordered 2
Chemical Mfgr.	46 L-S in use reordered 2
Amusement Goods Mfgr.	126 L-S in use reordered 2
Soft Drink Bottler	41 L-S in use reordered 3
Food Canner	72 L-S in use reordered 2

L-S

The "MASTER" Line

LEWIS-SHEPARD®

The most complete line of materials handling equipment anywhere

166 Walnut St., Watertown 72, Mass.

Please send 🗌 L-S JackLift Electric Catalog #34-1

Please send L-S JackLift Electric Catalog #34
S Master Line Catalog

Name Company

Address
State

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RAILROADS AND COOPERATION

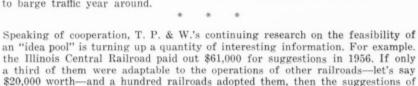


TOLEDO, PEORIA & WESTERN RAILROAD COMPANY

FELLOW MEMBERS OF THE DISTRIBUTION SYSTEM:

As a service organization in distribution, we continually seek ways to improve service to those who ship or receive goods and materials. Sometimes this improvement takes the form of new equipment. Sometimes it is an improved method, or perhaps an appreciated extra service such as T. P. & W.'s sending of passing reports from Peoria.

Recently, this improvement of service took the form of cooperation between two railroads here in the Peoria area. Sixty-two hundred acres of industrial land were served by either T. P. & W. or the Chicago & North Western Railway System. By exchanging trackage rights on more than five miles of each railroad's main track, both T. P. & W. and C. & N. W. now serve the area's present industries and the 4000 acres of land yet to be industrialized. This 4000 acres includes three T. P. & W. Industrial Districts—land "stockpiled" by T. P. & W. for industrial expansion and location. Over 100 million tons of coal are within 35 miles. Not only are rail facilities excellent, but the Peoria Municipal Airport is just a few minutes away . . . a new superhighway (Route 24) is adjacent . . . and the area is bordered by the Illinois River at approximately its northernmost point open to barge traffic year around.



In closing, we offer congratulations to the Illinois Central on their suggestion system success—success that might be many times multiplied by an "idea pool."

Illinois Central alone would be worth \$2,000,000 to the railroad industry.

Cordially yours,

J. Russel Coulter

J. Russel Coulter President



J. Russel Coulter

NOW! USS Gerrard AUTOMATIC STRAPPING MACHINE

Fully Tested, Tried and Proven



Where automation is important to your packaging and bundling problems, the USS Gerrard Model 12 Automatic Round Steel Strapping Machine is the answer to your needs. This machine has thoroughly proved its efficiency and trouble-free operation. Here, briefly, are some of its many advantages:

LOW COST-This is one of the lowest-cost automatic strapping machines on the market today.

COMPACT-Requires only 111/2 sq. ft. of floor space. Table height, 31". Weight (approx.), 1500 lbs.

SPEED-Up to 24 ties per minute.

TWO SIZES-Either machine will handle packages as small as wide by 2" high. The larger will handle packages as large as 26" wide by 20" high.

EASY TO OPERATE-Utilizes USS Gerrard Round Steel Strapping from 14 through 18 gauge. Easy to thread and operate.

LOW MAINTENANCE-One-shot, built-in lubrication system and compact, rugged, simple construction mean minimum service and maintenance.

TENSION-Can be predetermined, and when set is uniformly maintained on all packages regardless of size or weight.

SINGLE POWER SOURCE-All functions are mechanically controlled and interlocked. Simply plug in and run.

PACKAGES which vary in size and shape can be strapped with-

COMPRESSION DEVICE for pre-compressing packages or bundles can be supplied as optional equipment.

QUIET OPERATION-Fully engineered to eliminate noise and

For more complete details, contact your USS Gerrard sales representative. Also mail coupon for folder and the Gerrard Blue Book of Packaging. This contains full information on all USS Gerrard Machines and round and flat strapping.

GERRARD STEEL STRAPPING DIVISION, UNITED STATES STEEL CORPORATION GENERAL OFFICES: CHICAGO, ILLINOIS



USS ERRARD Round and Flat

PACKAGING STEEL STRAPPING

Gerrard Steel Strapping Division United States Steel Corporation 4731 S. Richmond St., Chicago, Illinois

Please send me folder on the Automatic Strapping Machine and the 36-page GERRARD Blue Book of Packaging. No obligation

- USE THIS COUPON---

Name

Company

Address

State Have Salesman Call

UNITED STATES

Circle No. 10 on Card, Facing Page 51, for more information

NO WAITING! NO DELAY! 308,000 POUNDS OF LIFT WEEKLY 77 FLIGHTS WEEKLY PLUS 6 ALL-CARGO

- Most frequent transatlantic cargo service of all.
- Direct cargo service to more cities in Europe than any other airline.
- More available cargo lift than any other airline.
- 'Most any size—shape—or weight goes by Clipper* Cargo. No other airline can handle volume shipments like Pan American.
- 30 Pan Am offices in the U. S. and Canada linked by the first coast-to-coast electronic reservations system to give you better, faster service.

Free booklet. To make the best use of air cargo services, send for FREE booklet, "There's Profit in the Air." Call your PAA District Sales Manager or write to Pan American World Airways, P. O. Box 1790, New York 17, N. Y. For further information on routes and rates, call any Pan Amoffice or your own agent. In New York, call STillwell 6-7341. *Trade-Mark, Reg. U.S. Pat. off.

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WORLD'S MOST EXPERIENCED AIRLINE

PAN

AMERICAN



Flies more cargo overseas than any other airline

WASHINGTON



By Ray M. Stroupe, Chilton Washington News Bureau

GOVERNMENT WAREHOUSING — Commercial warehouses remain the largest single group of storage sites for national stockpile items. The government has much of its \$6.5 billion worth of strategic materials in 86 of these privately-owned facilities. This number compares with 65 sites at military depots, 37 at industrial plants, and smaller numbers elsewhere. Present plans put the final stockpile objective cost at \$11 billion.

CARRIER RETURNS UP — Operating returns in 1956 for eight carrier groups subject to ICC rules amounted to \$19 billion. About \$10.9 billion, or more than half the total, consisted of railroad revenues. But while the rail lines had a 4.4 per cent gain over 1955, motor freight carriers registered a 6.6 per cent climb, and oil pipeline revenues rose 9.5 per cent. Over-all, the eight groups took in 5.1 per cent more revenue in 1956 than in 1955.

BAN RAILROAD OIL DRILLING — Railroads have run into a government ban against digging oil wells in some land grant right-of-way areas. Mineral rights on land covered by the Land Grant Act of 1862 are reserved to the government, the U. S. Supreme Court holds. This action reverses lower court findings in favor of the rail lines. Not affected are sections turned over to the railroads under other land grant acts.

TAX HELPER CHARGES—Charges billed by motor freight firms for providing drivers' helpers have a taxable status. Internal Revenue Service now advises that such charges are subject to the federal property transportation tax. The helpers' services supplement a transportation movement, says the IRS. Tax will have to be paid on the charges, even if they are billed separately.

AIRLINES AID VOTED — Passed by the Senate and awaiting House action is a bill that would help four freight-hauling airlines. This measure, S. 1474, would force the CAB to give permanent certificates to the Flying Tiger Line, Slick Airways, Riddle Airlines, and Aaxico. All want permanent licenses to aid them in getting long-term financing. They plan to buy better equipment and improve their operations.

FIND TRUCK DEFECTS—Brand-new appliances were plentiful on trucks examined in the recent ICC safety check in Florida. Nonetheless, the inspectors located failures, chiefly defective

brakes, that required 294 vehicles to be marked "out of service." These trucks were halted for up to 24 hours while repairs were made. In connection with the road check, ICC is investigating 107 carriers for possible enforcement action.

TANKER GOAL CLOSED—Federal tax incentives for builders of ocean-going tankers are ended now. Office of Defense Mobilization closes the national goal opened in 1952 to encourage the building of 100 tankers. This goal is considered filled, with 45 tankers built, or building, or contracted for without fast tax write-off aids. Tankers built in U. S. shipyards for U. S. Flag service are counted, even if no tax help was asked.

MAIL REVENUE LAGS—Lagging income from fourth class mail troubles the Post Office Dept. Officials there will draft for ICC approval a schedule of rate advances for handling parcel post and catalogs. Allocated costs of this service in the last full fiscal year were \$800,000 ahead of revenues, and current costs are higher. A bill to allow rate hikes on other classes of mail has been before Congress since early March.

WARNS ON BUDGET — Warnings by the refrigerated warehouse industry on federal spending excesses are laid before Congress. Sen. Byrd, D., Va., introduces into the Congressional Record a budget resolution adopted in April by the NARW. The resolution urges the lawmakers to work for budget reductions that will provide a solid basis for subsequent tax cuts. Resolution is in the Record of May 2.

GSA NAMES HARTZSCH—Top job in the Transportation and Public Utilities Service, General Services Administration, goes to Fred E. Hartzsch. The new commissioner, a Brooklyn, N. Y., native, joined GSA last year and has served as its chief administrative officer. Hartzsch has had more than 20 years' experience in the field of finance. He worked in a military government assignment in Germany after World War II.

CITES TIME PROBLEM — Owen Clarke. ICC chairman, objects to the present haphazard treatment of daylight saving time. The lack of uniformity with which individual states and cities move their clocks ahead is irritating to interstate shippers, travelers, and carriers. Unless the government sets a pattern for adopting daylight time,

(Please Turn to Page 92)

PROVED AMERICA'S

MOST MODERN MOST PROFITABLE

HIGHWAY TRACTOR IN VAN SERVICE

. THE WHITE 3000

ALLIED

VAN LINES, INC

NUGENT'S TRANSFER & STORAGE



NUGENT'S Transfer & Storage, Miles City, Mont., like transportation leaders across the country finds the White 3000 extra profitable — completely modern. Mr. James Nugent, a real pioneer in the industry, started business with a horse-drawn van in 1907.

They call it the "standard of the industry" and rightly so.

It permits extra cubage . . . is more profitable 'cross country or 'cross town . . . and keeps maintenance costs low for higher mileages.

The White 3000 will do the same thing for your business. Why not investigate without delay?

THE WHITE MOTOR COMPANY

Cleveland 1, Ohio

For More Than
55 Years
The Greatest
Name
In Trucks



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DISTRIBUTION AGE

now this is Vision is being the second of th



HYSTER

MONOMAST UPRIGHT The greatest basic lift truck advance in 25 years

...with MONOMAST® UPRIGHT ...available only on HYSTER TRUCKS

The superior visibility from a Hyster Truck equipped with a MONOMAST UPRIGHT enables operator to get far more tons moved per hour—for these reasons:

FASTER APPROACH – Operator has full view of forks as he moves into load.

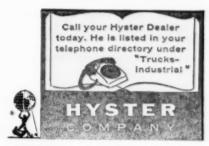
ACCURATE LOAD PLACEMENT with minimum maneuvering.

LESS PACKAGE DAMAGE—Operator can better see what he is doing.

LESS OPERATOR FATIGUE – Operator efficiency is increased. He works faster *naturally*.

Ask your Hyster Dealer today for full information, or a demonstration.

Available on All Hyster® Lift Trucks Through 4000 Lbs. Capacity

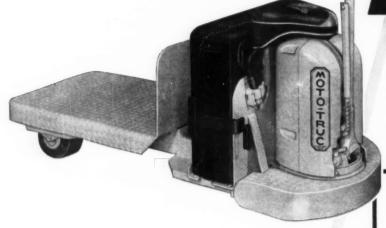


FACTORIES

PORTLAND, OREGON . DANVILLE, ILLINOIS
PEORIA, ILLINOIS . NIJMEGEN, THE NETHERLANDS

MOTO-TRUC Low Lift Platform Truck

... Simple Construction ...Rugged Performance



You can't beat Moto-Truc low lift platform trucks for skid handling efficiency. They're small enough to maneuver in the tightest spots, yet tough enough for outstanding performance on your roughest handling job.

Simplicity is the key to Moto-Truc performance. The powerful gear drive unit-exclusive internal expanding brakes-patented "Roller Grip" travel control -- all are among the features that guarantee lower operating costs, less maintenance and greater dependability.

The standard platform truck, model MTP, is only 24" longer than your load while the extra short model MTP-SC adds only 17" to the load length. Both are built in 4,000, 6,000 and 10,000 pound capacity with a wide range of platform sizes.

A LOOK UNDERNEATH

OUTBOARD WHEEL SUPPORT

> FULL WIDTH LIFT HINGES

See how Moto-Truc Platform Trucks use simple construction to insure rugged performance? For example, these two service proven features - Load wheels are supported on both sides to take a pounding from rough floors and heavy loads. Lift hinges run all the way across the platform for maximum load support and reduced maintenance.

Write Today For Bulletin 56W. Get detailed specifications on all Moto-Truc's low lift platform trucks.



Builders Of The First Walkie Truck



1956 E. 59th St., Cleveland 3, Ohio

Pallet . . . Platform . . . Hi-Lift Truck



Circle No. 13 on Card, Facing Page 51, for more information

On the Line-



No Competition?

At a traffic club luncheon, the other day, the program chairman made a remark that has troubled us up to this moment. After he introduced a group of carrier representatives at the head table, he said, "What a distinguished lineup of competitors!

"I'm glad I'm not a freight salesman in this area. I'm glad I'm a traffic manager—no such competitors constantly crawling up my back."

We're not sure whether this man was trying to be an humorous emcee or whether he was expressing an inner conviction. However, it wasn't the first time we heard a traffic man make such a remark.

What troubles us is that if many traffic men really believe that they are in a non-competitive vocation, they could set the profession back several decades!

Not competitive? Mr. TM, there is not one job in this world—not any for pay or glory—that is without competition. This very hour, somebody in your own department is silently "crawling up your back"—with somebody else up his back.

Have you forgotten your own ambitions when you were a step or two down the ladder? That's an example of personal competition.

Now, let's look at competition from an interdepartmental standpoint. Are you so lucky that no person from another department ever tried to exert pressure on you in behalf of a friend of his—a carrier whose services you've never used? Are you so lucky that nobody in the sales department—or purchasing or top management —ever held the club of reciprocity over your head? Yes or no, that's another kind of competition vou have—current or potential.

Anyone who wants to perform one or all of your functions, exercise your prerogative, substitute your ideas, veto your decision, remove your authority, replace you—or who displays greater knowledge, achieves better results, or casts a shadow of doubt on your abilities—is a competitor.

They come in all shapes and sizes, all ages, both sexes, honest and 'dishonest, out in the open and behind your back.

Of course, you really made reference to intercompany competition. Well, hasn't your sales department ever told you that certain shipments were sold on a freight prepaid basis, or to charge the freight to the dealer in Podunk?

Your company's competitor undoubtedly had something to do about that. If the truth were known, probably your company's competitor has a traffic manager who outsmarted you in some way.

That kind of competition is comparable to that experienced by your distinguished carrier friends at the head table—though less direct. If you are not aware of its existence, you've led a sheltered life, son. Some day, you may get a rough awakening.

Surely, you know that competition made American business and industry—and your standard of living—the greatest.

Mr. TM, if you really lack competition, you should be unhappy, not elated. We suggest that you find yourself a job where there is competition. Better yet, if you would like to lead a richer, more useful life—or just honestly earn your pay—stir up your own competition!



Yakkety Yak

This couldn't happen in transportation, but it does point up the keenness of sales competition;

The buyer had a birthday and several salesmen dropped in with

"a little token of good wishes."

One aggressive fellow also took
the boss' secretary out to dinner that
night. He wined her and dined her,

then asked what gift his arch competitor gave the buyer.

"A beautiful key case."

"Key case? Don't you think that's an awful crummy gift?

"With keys to a Cadillac?" SYSTEMS: Competition-shy Fred

Fatback prefers the easy way: Seniority—Start working at 16 and outlive all bosses.

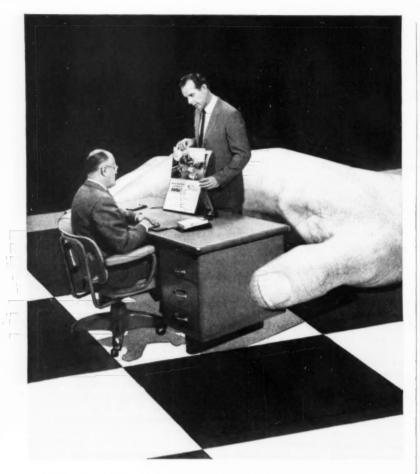
Union—Marry boss' daughter.

Espionage—Marry worst competitor's daughter.

Blondes—Catch the boss playing around with them.

Confusion—Keep such awful records that nobody knows what goes on, and the bosses will be afraid to fire you.

Economy—Work for such small pay that the company can't afford to replace you.



MOVING TIPS FOR TRAFFIC MANAGERS:

Mayflower's Scientific Research Makes Moving Safer

Doing a better job for your people and your company, year after year, is the aim of the Research and Development program carried on constantly in the Mayflower organization. It has produced many new ideas, methods, materials and equipment to protect household goods better, increase efficiency, and reduce work for shippers. Any improvement, great or small, is important. Just the simple idea of wrapping in red tissue small, easily over-looked pieces has many times helped prevent their loss. So it is with Mayflower's decision to eliminate tailgates from its vans . . . and the development of its standardized packing materials and methods. You can count on Mayflower for leadership in providing America's Finest Long Distance Moving Service, not only today, but also tomorrow.

AERO MAYFLOWER TRANSIT COMPANY, INC. . INDIANAPOLIS



America's finest long-distance moving service

TO THE EDITOR

Distribution Costs

To the Editor:

We are greatly interested in any information that has been published on the subject of distribution costs, particularly with respect to physical handling and movement.

Louis A. Wild

Becton, Dickinson & Co.

The science of distribution costing is a young one. Available information on the subject, for this reason, is sometimes hard to come by. This magazine, however, has been publishing articles on the subject for some years. At the same time we have editorially decried the lack of data available decried the lack of data available from industry. It is surprising to learn how many hundreds of firms in this country know little or nothing about their own physical distribution

Listed below is a brief distribution cost bibliography. It gives the name of the article or publication, the author, the agency from which it is available,

the agency from which it is available, the size, and the cost:

"Practical Distribution Cost Analysis," by D. R. Longman and Michael Schiff, from Richard D. Irwin, Inc., Homewood, Ill., 450 pp, \$6.50; "Profit Analysis, Distribution Costs, Working Papers," by F. M. Eisner, from F. M. Eisner, 70 Linda Ave., White Plains, N. Y., 364 pp, \$10; "Cost Study Provides Valuable Data," from N.A.R.D. Journal (Jan. 16 issue), 205 W. Wacker Drive, Chicago 6, 25¢; "Advisory Committee on Cost Justification Report to the FTC," from Federal Trade Commission, Washington 25, D. C., 25 Commission, Washington 25, D. C., 25 Commission, Washington 25, D. C., 25 pp, single copies free on request; "Distribution Cost Analysis," BSB-172, from U. S. Department of Commerce, Washington 25, D. C., 4 pp, 10¢; "Value Added by Distribution," from Domestic Distribution Dept., U. from Domestic Distribution Dept., U. S. Chamber of Commerce, Washington 6, D. C., 17 pp, 20¢; "Methods of Increasing Labor Productivity in Multi-story and Small One-Floor Grocery Warehouses," Marketing Research Report No. 142, from Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., 42 pp, 25¢.

The TM and Management

To the Editor:

Your March editorial caught my interest. I am one of many in the traffic field who has come in contact with those segments of industrial manage-ment which have been and still are short-changing their traffic personnel.

The food products executive to whom you refer sounds like the type of gent who reached his present position by marriage into a family of owners, or by inheriting enough

money to move into a top spot on the momentum of the old long green.

How else could he have moved up the rungs of management where one of the necessary qualifications of an executive is appraisal of ability, and the ability to appraise?

Obviously, our subject's appraisal of a traffic man must have been weakened by one or more of these

facts

1. He has a natural antipathy for the traffic department because it doesn't add to the gross income in the same tangible manner as Sales;

2. He takes too much for granted, and has never taken the time to find out just what the hell a traffic department can do if it has a free rein;

3. He overlooks the psychological effect of his attitude on the traffic

personnel.

If I found that I had to buck this type of executive, I'd start looking around pronto. Thank God, his breed is destined to become a minority!

J. S. Durato

Warehouseman's Lien

To The Editor:

We would like your legal opinion of the following:

A lady put a lot in storage. Later on she and her husband passed away. The heirs could not pay storage charges and we auctioned off this lot. Now there are several companies in Reno that have charges against this lady for groceries, flowers, medicines, and furniture repairs. Does our warehouseman's lien still give us authority to take out our charges, and leave the balance for the other creditors? There would not be enough left to satisfy them all, and we understand they are going to probate the estate.

Does our lien carry as much weight in the case of a deceased as it does where the depositors are still living? Should we file a claim in the court house for our charges?

H. A. O'Brien O'Brien's Transfer and Storage Reno, Nevada.

After giving this matter considerable deliberation and study, my opinion is that your lien is prior to opinion is that your lien is prior to the others. However, it is quite ob-vious that there may be new higher court decisions in your state that have not, as yet, come to my atten-tion. Hence, I suggest that you con-sult a local lawyer.

suit a tocal lawyer.

Quite naturally when once a first lien is established, it is not ordinarily possible for a second lien to take priority over the first lien, either properly recorded or allowable under the state laws. Hence, it is advisable that you have your local lawyer file proper claims and papers to secure your first lien.—Leo T. Parker, Legal Consultant.

Letters for publication in DISTRI-BUTION AGE must be signed and must give the writer's title and company affiliation. Names will be withheld upon request.



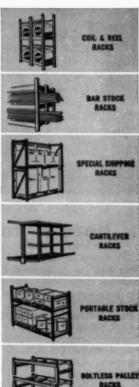
Big or little, strong or fragile, anything stacks or ships better on EMI quality racks. They protect stock, cut handling costs and speed inventory.

EMI RACKS are made of strong, tubular steel and are adjustable to fit any space or unit load. Special racks designed to your specifications with field engineering service on any installation.

Write for our illustrated catalog before you plan additional storage space or the purchase of stacking or shipping equipment.

Well Stacked Racks for Industry

21542 HOOVER ROAD



Circle No. 14 on Card, Facing Page 51, for more information



...here's "manpower" that hands you a bonus!

Think how many of your plant's handling jobs can be accomplished with much less effort—swiftly and profitably—by one operator "teamed up" with a powerful Towmotor fork lift truck!

You get an entirely new concept of modern mass-handling. You get a "bonus" in extra profits because you multiply manpower with the payroll you have. And you get a bonus in plant-wide morale when work flows on-schedule through every department . . . effortlessly . . . with a bigger day's work done.

Called the "ideal" fork lift truck by management and operators alike, the latest Towmotor models offer exclusive features as advanced as these, at no extra cost:

- · New-concept functional engineering
- · Simplified dual-entry compartment
- · Full-traction weight distribution

· Adjustable off-center visibility

· New motion-studied centralized control

•Towmotor improved precision steering Power steering, 'TowmoTorque' Drive at extra cost These and 60 other points of superiority are described in Towmotor booklet SP-23 for comparison. Get a copy from Towmotor Corporation, Cleveland 10, Ohio.

Leaders for 38 years in building Fork Lift Trucks and Tractors



Gerlinger Carrier Co., Dallas, Oregon, is a subsidiary of Townotor Corporation, Cleveland, Ohio

The Time Has Come, The Walrus Said—

A new method to reduce the number of bumps potatoes get in being prepared for shipment has been adopted by a large shipper in the Columbia Basin. That's in Washington.

After the potatoes are brought in from the fields, they are "flume-handled" that is, flushed along through troughs by a strong current of water which cleans them and removes the rocks, carries them to a chlorinating bath and then to the sizing and grading machinery. The machinery is designed so the tubers never drop more than a few inches, and then onto soft padding. The new method is said to reduce the number of bumps by 50 per cent.

There are three of these plants in operation—two of them at Moses Lake and Othello, which are both on our line. And speaking of potatoes, The Milwaukee Road is hauling enough of them to market out of the Basin these days to supply a sight of dinner tables. Last year we moved out 4,750 carloads.

sssss boom!

Shipments of not only spuds but a variety of agricultural products out of the Basin have been whooshing up like a sky rocket. The towns are growing. For instance, the population of Moses Lake back in 1940 was 326. At last report it was 11,495. Othello had 332 people in 1940, and now has 2,758. And once tiny Warden—another Milwaukee Road station—went from 78 people in 1940 to nearly 1,000 in 1956.

Last year 12 large new produce shipping sheds and storage warehouses were built at Basin points to handle the increased volume of shipping.

Why all this expansion? The Columbia Basin project is now getting into full stride. Irrigation water from Grand Coulee dam in the mighty Columbia River is turning thousands of acres of once parched lands in central Washington into a garden. And the full potential hasn't yet been reached.

That's out West. Now let's take a look East at the other end of The Milwaukee Road system. At Franklin Park, for instance, just northwest of Chicago on the periphery of the huge Chicago industrial complex.

Full speed ahead!

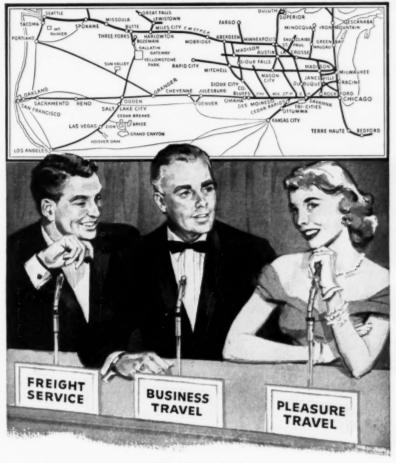
It's full throttle right now on a great new industrial development in that area. Within five to ten years \$50,000,000 is expected to be invested in new plants in Franklin Park. The Milwaukee Road sold 218 acres of its own land for the development, and will serve the area exclusively with rail transportation.

That's real expansion. And it's going on at other places along the Milwaukee Road. All told, 192 new industries were established at various points on our lines in 1956.

What's it prove? That the Midwest and West are still new . . . that there's still a lot of room for growth out here.

Paraphrasing Horace Greeley, Go West, businessman! And if it's a site you're wanting, just talk to our Industrial Development Department. They'll have the right answers to your problems.

The Expediter



It's no guessing game with this panel of experts

What's your query? Travel costs or tourist attractions... business itineraries or luxuries available en route... freight rates or available plant sites? In any case, you'll find that Milwaukee Road representatives, located in principal cities throughout the nation, are your best source of right answers. Because they know the West thoroughly and are eager to cooperate in your travel or traffic plans, they have the money-winning answers to all questions of transportation.

GREATEST FLEET IN THE WEST

SUPER DOMES

Olympian Hiawatha Chicago-Seattle-Tacoma AM Twin Cities Hiawatha PM Twin Cities Hiawatha

STREAMLINERS

City of San Francisco Pioneer Limited Chicago-St. Paul-Minneapolis City of Denver

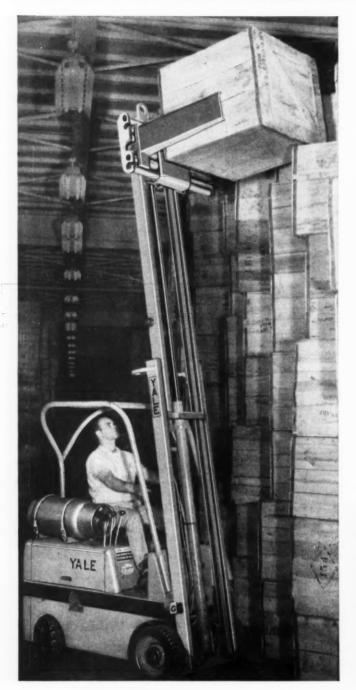
DOMELINERS

City of Los Angeles The Challenger Chicago-Los Angeles City of Portland

THE MILWAUKEE ROAD

J. M. Cunningham, General Freight Traffic Manager Union Station, Chicago 6, III.

YALE LP-GAS TRUCK ASSURES EXTRA SAFETY IN CONFINED WAREHOUSE AREAS



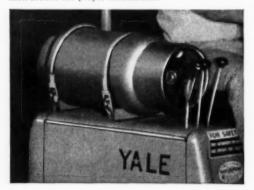
Yale LP-Gas Trucks have been awarded the Underwriters' Laboratories and Factory Mutual approval—your assurance of maximum safety when you must move materials in enclosed areas. Yale LP-Gas Trucks produce no harmful fumes, thus can operate in warehouses, crammed storage rooms or deepfreezes with complete safety for driver as well as odor-absorbing materials. Furthermore, the fuel system of Yale LP-Gas Trucks is completely sealed to eliminate danger from leaks or evaporation...fuel supply is shut off when ignition is turned off.

Yale LP-Gas Trucks are also exceptionally economical to operate because you can save up to 7 cents a gallon when you buy and store LP-gas in bulk. Engine stays cleaner, requires less maintenance...downtime is cut by as much as 50%. Yale LP-Gas Trucks are available in capacities from 2,000 to 10,000 lbs. For full facts, write The Yale & Towne Mfg. Co., Phila. 15, Pa., Dept. A-26.

To meet the need of expanding industries for better materials handling methods and equipment, look to Yale for advances in research, engineering, manufacturing, sales, service—as

YALE BUILDS FOR THE MEW ERA

New Yale LP-Gas Conversion Kit—the first with U.L. listing—now permits YOU to convert Yale Gas Trucks you already own into LP-Gas Trucks—and get complete safety approval from local inspectors and authorities. The kit includes all necessary parts and easy-to-follow instructions for proper installation.



YALE INDUSTRIAL LIFT TRUCKS AND HOISTS

Gasoline, Electric & LP-Gas Industrial Lift Trucks • Worksavers • Warehousers • Hand Trucks • Hand and Electric Hoists

Circle No. 16 on Card. Facing Page 51, for more information

By John Grindrod

DA European Correspondent

N ORDER to regulate the flow of crates, particularly empty ones which otherwise tend to pile up on the conveyor lines, Truman, Hanbury, Buxton & Co. Ltd. have recently installed photo-electric devices in their London, England, brewery. These give close control of the conveyor lines.

After the return empty crates have been carried into the bottling department on a conveyor system, the bottles are removed and passed to a washing machine. After this they are automatically filled, crowned, pasteurized and labelled.

8.500 Per Hour

They then are re-packed in the crates and carried out of the department on another conveyor. These bottling lines can each handle up to 8,500 bottles an hour.

While the bottles are passing through these stages the empty crates are drawn to the top of a hump on an electrically driven belt. From the top of the rise they are gravity fed to the point where the filled bottles are packed in them.

It is in this gravity feed section of the crate conveyor line that piling up hitherto tended to occur at times when the rate of supply of empty crates exceeded the rate of filling.

Cells Stop Belt

At such times, unless the electrically driven rising belt could be checked, chaos would result. To obviate this a projector and photocell, with associated amplifying equipment, have been aligned with the top of the hump.

The crates, as soon as they start piling up, intercept the light beam and cause an immediate drop in the voltage derived from the photo-electric effect. This variation, after amplification, activates a relay which at once cuts out the electric motor driving the upward section of the conveyor line. The whole operation is completed in a fraction of a second.



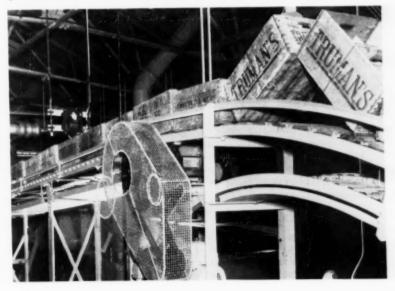
Photo Electric Cell Paces Package Line

Electrically driven belt conveyor carrying empty crates to be filled is controlled by photo electric cell which prevents pile up

When the jam is released, the crates no longer intercept the beam of light, and the conveyor automatically switches on again. The London brewery reports that the

photo electric cell system has speeded the line considerably, eliminated lost time formerly experienced with large scale jams, and cut case and bottle breakage. •

Crates piling up at the top of the hump intercept the beam projected on the photocell at left. This causes power belt conveyor to stop until jam is released.



Selection of the Right Wheel for the Right Handling Job

The efficiency of rolling equipment depends, in a large part, on wheel design. This guide is designed to help you find the best wheel for any given task. It includes wheel types, sizes, and special characteristics

THE RIGHT equipment for the right job is the basic rule for all materials handling operations. Where rolling stock is involved, one of the more important considerations is selection of the proper type of wheel.

Over-the-floor equipment will not give peak efficiency unless it is properly wheeled. This rule applies to all types of rolling equipment, from the simplest dolly or hand truck to the largest and most complex powered industrial truck.

Often proper wheel application has been credited with savings over and above mere equipment efficiency. In some instances changes of wheel design have permitted use of less expensive manual equipment where previously powered equipment had been considered necessary. In other cases powered industrial trucks equipped for better performance through wheel changes have eliminated the need for additional and larger trucks.

The material presented below has been compiled as a guide to the selection and application of wheels. It is arranged to aid in the purchase of replacement parts as well as new equipment.

How to Choose

In selecting wheel equipment, it is best to study all factors and then recognize the most dominant needs. Low first-cost often may be By W. J. Daugherty
Caster & Floor Truck Mfg. Assn.
Chicago, Ill.

of prime consideration. In many cases it will be the most important factor. In other cases, higher initial cost for certain types of wheels may be offset by subsequent operating economies.

If protection of floors is of primary importance, pneumatic, semi-pneumatic, cured-on or demountable solid rubber tires may be indicated. In other cases, the classification of wheels by type and size is dominant. The question of tires or no tires then becomes secondary.

For purposes of selection, it is most logical to begin with an analysis of the various types of wheels available, and the operations for which they are best suited.

Wheels of large diameter, as an example, enable easier pulling and are less affected by roughness of ground or floor, or other traction factors. Closely related is the matter of providing sufficient clearance between truck platform and floor-ground obstacles. This is determined by the distance from the hub-center to the ground. This in turn is influenced by tire thickness as well as wheel size. In four-wheel trucks the wheelbase—distance from front hubs to rear—is a clearance factor. The longer the

wheelbase, the greater the overall wheel-plus-tire diameter required where floor obstacles exist.

Weight of the load also affects wheel size. Small wheels which can negotiate relatively rough floors with a light load are under a severe handicap with a heavy load.

Load weight also must be considered in determining the width of the wheel's floor-contact surface. As the load gets heavier, either a wider tread or a larger diameter must be specified. Again, however, factors exist which modify this assumption. If floors are sensitive to the type of tire favored, tread width must be increased. On the other hand, excessive width should be avoided since it makes a truck harder to propel.

Classification of Types

Spoke-type wheels (Fig. 1) consist of individual steel spokes of various shapes cast into the hub and riveted or welded to the rim. This type is best suited for outdoor use. These wheels vary in diameter, in tread width, and in tread thickness. They also are available in several varieties of hubs. In the basic design, the wheel tread is flat, for use without tires. Other shapes of the tread are available, however. Flat-rim steel wheels also are used in combina-

(Please Turn to Page 84)

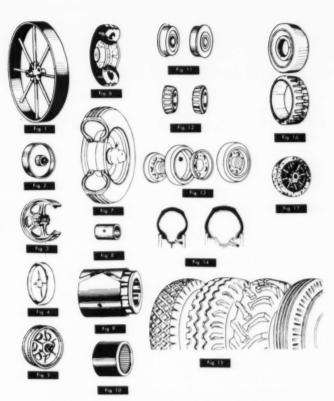


Table II—Dimensional Standards Molded-On Industrial Wheels

Roller or Ball-Bearing Equipped for Non-Powered Equipment

Wheel Diam. & Width of Base, Inches	Maximum Core and Rim Width, Inches	Overell Hub Length, Inches	Inside Diam. of Bearing or Axle Diam. Inches	Maximum Operational Load Pounds, 10 mph Intermittent
4 x 11/2 4 x 11/2	23/4 x 11/2 23/4 x 11/2	15/6	1/2	200
5 x 11/2 5 x 11/2 5 x 2 5 x 2	3½ × 1½ 3½ × 1½ 3¼ × 2 3¼ × 2	15% 15% 21/4 21/4	96 34 56 34	240 240 350 350
6 x 11/2 6 x 11/2 6 x 2 6 x 3 6 x 3	4 9/16 x 11/2 4 9/16 x 11/2 41/4 x 2 4 9/16 x 3 4 9/16 x 3	15/6 15/6 21/4 31/4 31/4	3/4 3/4 3/4 1/4	280 280 410 680 680
8 x 2 8 x 2 8 x 2 ¹ / ₂ 8 x 2 ¹ / ₂ 8 x 2 ¹ / ₂ 8 x 3 8 x 3	6/4 x 2 6/4 x 2 6/4 x 2 6/4 x 2/2 6/4 x 2/2 6/4 x 2/2 6 x 3 6 x 3	21/4 21/4 21/4 21/4 21/4 31/4 31/4	7/4 7/6 1 1 //4 1 //4	500 500 500 670 670 670 840
10 = 21/2 10 = 21/2 10 = 21/2 10 = 21/2 10 = 3 10 = 3	8 s 21/2 8 s 21/2 8 s 21/2 1 s 21/2 8 s 3 8 s 4	2 1/4 2 1/4 2 1/4 3 1/4 3 1/4 4 1/4	1/4	790 790 790 790 790 1000 1000
12 x 21/2 12 x 21/2 12 x 3 12 x 3 12 x 3 12 x 4 12 x 5	10 x 2 ¹ / ₂ 10 x 2 ¹ / ₂ 10 x 3 10 x 3 10 x 3 ¹ / ₂ 10 x 4	2 ½ 2 ½ 3 ½ 3 ½ 4 ½ 4 ½ 5 ½	1% 1% 1% 1%	900 900 1140 1140 1370 1600 2050
14 x 3 14 x 3	12 x 3 12 x 3	31/4 31/4	11/4	1280 1280 1420
16 x 4 16 x 5 16 x 5	14 x 4 14 x 5 14 x 5	4/4 5/4 5/4	11/2	1990 2570 2570
18 x 3 18 x 5 18 x 5	16 x 3 16 x 5 16 x 5	41/4 51/4 51/4	1%	1550 2800 2800
20 x 3 20 x 5 20 x 5	18 x 3 18 x 5 18 x 5	31/4 51/4 51/4	11/4	1680 3020 3020
28 x 4	25 13/16 x 4	6	13/6	3050

Note: Decrease the above load ratings 15% when tires are used on power-driven vehicles. The above load ratings are predicted on Tire and Rim Association standards.

Table I—Dimensional Standards Plastic Industrial Wheels

Roller or Ball-Bearing Equipped for Non-Powered
Equipment

		Equipment	
Wheel Diam. & Tread Width, Inches	Hub Length, Inches	Inside Diam. of Bearing or Aule Diam., Inches	Maximum Operational Load, Founds, 4 mph Continuous, 10 mph Intermittent
3 x 11/4 3 x 11/4	1 % 1 %	4	260 260
4 x 11/2 4 x 11/2	15/0 15/0	4	375 375
4 x 2 4 x 2	21/4	1/4	500 500
5 x 11/2 5 x 11/2	15/8 15/8	5/6 3/4	440 440
5 x 2 5 x 2	21/4	32	580 580
6 x 1½ 6 x 1½	15/8	1/2	480 480
6 x 2	21/4	3/4	640
8 x 2 8 x 2 8 x 2	21/4 21/4 21/4	76	675 675 675
8 x 2½ 8 x 2½ 8 x 2½	23/4 23/4 31/4	1/4	850 850 850
8 x 3	31/4	1 14/4	920 920
10 x 21/2 10 x 21/2 10 x 21/2 10 x 21/2 10 x 3	2 % 2 % 2 % 3 % 3 %	1/4	940 940 940 940 1075
12 x 3 12 x 3 12 x 3 ¹ / ₂	31/4 31/4 41/4	1/2	1240 1240 1450

Table III—Dimensional Standards Metal Industrial Wheels

Roller or Ball-Bearing Equipped for Non-Powered Equipment

Wheel Diam. & Rim Width Inches	Overall Hub Length Inches	Inside Diam. of Bearing or Axle Diam. Inches	Maximum Operational Load, Pounds, 4 mph Continuous 10 mph Intermittent
4 x 11/2 4 x 11/2 4 x 2	15/6 15/6 21/4	4	425 425 500
S x 11/2 S x 11/2 S x 2	1.5/m 1.5/m 2.5/4	3/4	500 500 575
6 : 1/2 6 : 1/2 6 : 2 6 : 3	15/6 15/6 25/4 35/4 35/4	1/2 1/2 1/4 1/4 1/4	575 575 850 1425 1425
8 x 2 8 x 2 8 x 2 8 x 2 ¹ /2 8 x 2 ¹ /2 8 x 2 ¹ /2 8 x 3	21/4 21/4 21/4 21/4 31/4 31/4	% %	1050 1050 1050 1400 1400 1750 1750
10 x 21/2 10 x 2/2 10 x 2/2 10 x 3 10 x 3	2 % 2 % 2 % 3 //4 3 //4 4 //4	1/2	1450 1650 1650 1650 2075 2075 2075 2930
12 x 21/2 12 x 21/2 12 x 3 12 x 3 12 x 31/2 12 x 4 12 x 5	2 \\ 2 \\ 4 \\ 3 \\ 4 \\ 4 \\ 4 \\ 5 \\ 6 \\	1/4 1/4 1/4	1700 1700 2100 2100 2200 2660 4100
14 x 3	31/4	11/4	2140 2140
16 x 3 16 x 4 16 x 5	41/4 41/4 51/4	11/4	2360 3320 5140
18 x 3 18 x 5	5/4	11/4	1935 5600
20 x 3 20 x 5	31/4 51/4	11/4	2100 6040
28 x 4	6	1%	

Note: Load ratings are maximum for ease of operations and are based on ideal operating conditions.

AMHS Sees Handling As the Key to Automation

Conferences held during National Exposition cover new developments in automation, containerization, outside storage, and piggy-backing. Need seen for materials handling methods that extend from supplier through your plant and warehouse to the ultimate consumer or user

NTEGRATION, containerization, outside storage, and automation. These are the words used by the American Material Handling Society as it studied the future of its industry during its recent Technical Sessions in Philadelphia.

The three days of conferences were held in conjunction with The Seventh National Materials Handling Exposition, April 29 through May 3.

Taking a stand for integration of the materials handling function at both ends of production lines were D. J. Davis, vice president, manufacturing. Ford Motor Co.: Ronald H. Robison, materials handling and packaging engineer, Talon, Inc.; Eric Carlson, standards manager, Production Department, Ralston-Purina Co.; James R. Bright, associate professor, Harvard University; J. Wellington Hall, supervisor of materials handling equipment and methods, Meter Division, Westinghouse Electric Corp.; and E. L. Greuling, materials handling director, Buick Motor Division, General Motors

Greuling explained that at Buick the main system is so integrated as to permit free flow of equipment between plants.

"Each standard piece of equipment is designed to meet the conditions required for many similar jobs," he said. "Compromise is used between jobs in order to eliminate the introduction of special equipment."

Having a well laid out plant with the latest mechanical handling equipment is of no value if your suppliers control your methods, Grueling said. Therefore, Buick specifies to its suppliers: "Ship packaged for mechanical handling, warehousing and efficient presentation to point of use."

Coordinated Effort

Hall said that from the receiving dock through production to warehousing and the shipping dock, "the job of installing a good system of handling materials must be coordinated effort . . ."

He stressed that 25-30 per cent of industry's manufacturing dollar is spent for handling materials. This is serious enough to warrant the attention of our topmost managements, Hall said.

Davis, also speaking of cost reduction, said, "There is no question about materials handling being a forerunner in the race to cut production dollars. The broad scope of materials handling conceivably represents the last plateau of major cost reduction."

At Ford, Davis, said, automatic handling is considered to include

all facilities required to maintain continuous automatic production. It is reaching into packaging, storing, and loading operations.

Emphasizing this integration beyond the plant, Robison discussed materials handling as a cycle. "The latest concept of this cycle. . . covers all movements of materials or products from your vendor's method of packaging and packing, method of shipment to your receiving department, receiving department, receiving department operations, storage areas, in process operations, packaging, shipping to your customer or warehouse, the warehouse operation, and final distribution . . ."

Citing the basic industrial engineering principles which have been applied as production moved into automation, Carlson said, "We need to eliminate, simplify, combine, and standardize these materials handling and warehousing operation.

"Anyone who has had experience with materials handling and ware-housing operations knows that up until a very few years ago, these operations were pretty much considered a necessary evil . . .

"Even today the management functions of materials handling planning and scheduling, and warehouse control are sadly lacking in most instances.

"This means that we must establish a whole new concept of man-

Reasons for Replacing Handling Equipment*

- 1. Equipment Deterioration—Deterioration that makes equipment more costly to maintain than to replace.
 - 2. Elimination of Manual Labor—Replacing it with power.
- 3. Advances in Handling Equipment—Taking advantage of advances that increase the adaptability and life of equipment.
- 4. Production Advances—Change in production necessitates better handling.
- 5. Plant Layout Requirements—Plant layout dictates handling needs. If layout changes, so must handling.
- 6. Saving Space in Warehousing and Storage—Space can be saved by better methods and equipment.
- 7. Savings in Production and Inventory Control—Mechanized handling can reduce work-in-process inventories and simplify routing and dispatching.
 - 8. Safety—New handling equipment can eliminate hazards.
- 9. Reduction of Damage New equipment can eliminate damage to parts or units.

*From a speech on "Making Equipment Replacement Pay Off," by G. E. McNeive.

agement function in this field, recognizing materials handling and warehousing operations as an integral part of overall plant operations."

Trends for the Future

Bright, reporting on trends in mechanization, found indications that progress beyond production lines is being made. "There is a highly significant growth of mechanization for portions of activities lying on both ends of the production line . . ."

Advancements in containerization, unit handling, shipping, and packaging were included in speeches by several industry leaders.

A. M. Schofield, superintendent of TrucTrain Service for the Pennsylvania Railroad, brought AMHS members up to date on piggy-back on the PRR.

Started in 1954, the PRR truckon-flat car traffic has grown to 1700 company trailers and 5800 motor common carrier trailers per month. This means a gross revenue in excess of 12-million dollars a year.

"Nothwithstanding these impressive figures piggy-back still is in the experimental stage, with the broad outline of its future still uncertain," Schofield said.

With regard to the growth of

interline service, Schofield predicted that service will soon extend "from coast to coast and from Maine to Texas."

Bulk Shipping

The economics of bulk shipping—any system that reduces the number of packages by combining packages or increasing container size—was discussed by Thomas F. Mangold, special materials handling engineer, E. I. du Pont de Nemours & Co., Inc.

"Bulk shipments usually are believed to permit substantial savings to . . . both the supplier and the customer. In the majority of the cases, the customer does save money through receipt of bulk shipments when supplied at no additional cost. However, except in the case of very large volume, the labor the supplier saves . . . does not always pay for his increased . . . costs.

"We have found from a supplier's standpoint that, generally, loose paper bags filled on a high speed filling line and shipped loose provide the most economical method of shipping dry chemicals up to a volume of approximately 2,000,000 lb per year. Above this point bulk containers become economical.

"Until recently, none of the commercially available expendable bulk containers were as economical as bags . . . It therefore becomes a problem for the supplier to analyze, develop and engineer the optimum bulk systems."

To meet this need "we are developing such a container that appears to have the potential of revolutionizing the bulk shipping picture to the smaller customers. This container is called the duPont Pillar-Pac.

"It is constructed of a rectangular corrugated fibreboard body, approximately 36 in. x 36 in. x 60 in. A cylindrical fibreboard sleeve which forms tangential to the square body is inserted into the body. Caps then are placed and steel strapped on the top and bottom of the container in an interlocking manner to prevent leakage of the material and furnish structural strength at the top and bottom. Three wooden 2 x 4's are glued to the bottom of the container forming its own pallet for standard fork truck handling.

"The Pillar-Pac can be designed to conform with the operation. The containers currently in use range from 36 to 42 cu ft in volume and have a net weight capacity of 1500-2000 lb."

Unit Loads

Robert N. Roegner, materials handling engineer, Armour & Co., mentioned gains achieved by his company in shipping unit loads.

"Our experience to date has been that some contract carriers will accept pallet shipments without charging a tariff for pallet weight. We also are permitted to ship pallet containers or pallets in our own railroad cars free of tariff. However, we ship large volumes of unwrapped meats . . . in metal pallet containers weighing approximately 200 lb each. Common carriers generally have refused to ship these containers free of tariff, due to the fact each shipment of 20 pallet containers would add 4000 lb of weight to the load."

Advice on outdoor storage was presented by Malcolm J. Odell, director of research, Ludlow Papers, Inc.; R. L. Franing, materials handling engineer, East Moline Works, International Harvester Co.; and Frank C. Wier, materials handling engineer, Timken Roller Bearing Co.

(Please Turn to Page 94)

Seventh National Materials Handling Exposition

A round-up of new physical distribution tools and supplies displayed at the Philadelphia show, where some 354 firms exhibited 100 different types of equipment in 6000 models

A RECORD number of exhibitors displayed a record number of types and models of equipment for 18,600 visitors at last month's Seventh National Materials Handling Exposition, in Philadelphia. (The accompanying Handling Conference is reported on Pages 38-39 in this issue.)

Descriptions and pictures of much of the equipment are presented on these and the following pages. For additional information on any of the items shown, the reader is invited to circle the appropriate numbers on the Reader Service Card facing Page 51 in this issue.

Other new equipment shown was described in the Pre-Show Round-up in the April issue of DISTRIBUTION AGE, Pages 58-61.

At the close of the Exposition an announcement was made by Clapp & Poliak, Inc., show management, that the next show has been scheduled for June 9-12, 1958, in Cleveland's Public Auditorium.

Pallet Truck

The Rack Engineering Co. offers a mechanical pallet truck of all-welded steel construction and light-weight design. Able to handle loads on single



Batching Body

Anthony Co. has available a batchbody capable of hauling four full batches of cement within legal load

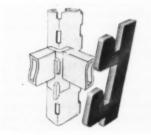


limits. The body features a Teleramic headlift hoist, batch boards and cement boxes. Both the tailgate and batch boards are air-operated from the cal-

Circle 31 on Card Facing Page 51

Floating Wedge Lock

Sturdi-Bilt Steel Products, Inc. has available a wedge lock device claimed to eliminate bolts, nuts, cross bracing



and erection welding, joining bulk bin shelves to corner uprights in such a manner that increased loading tends to increase rigidity of the entire structure.

Circle 32 on Card Facing Page 51

or double-face pallets, the steel forks will hold 1500 lb. Lifting, pushing and pulling are one-man operations. Steering is aided by steel ball-bearing swivel casters

Circle 33 on Card Facing Page 51

Piggyback Tie-down

American Car and Foundry Div. of ACF Industries, Inc. has developed a new tie-down known as the retractable trailer hitch. This device overcomes shock damage to trailers and their cargoes. The tie-down is a folding stanchion that can be installed on any flatcar bed. It is raised by means of a power wrench until it meshes with the trailer's kingpin and levels the load. It is then locked in place and becomes a mooring.

Circle 34 on Card Facing Page 51

Automatic Strapping Machine

A new automatic round steel strapping machine is available from the Gerrard Steel Strapping Div., United States Steel Corp. This machine, known as the Model-12, requires only

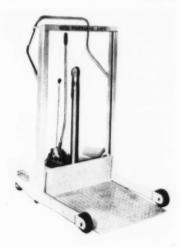


11½ sq ft of floor space. It can tie packages from 2 in. high and 8 in. wide to 20 in. high by 26 in. wide. All functions are mechanically controlled and interlocked enabling a capacity of 24 ties per minute. A built-in lubrication system lubricates all working parts by the pull of a lever.

Circle 35 on Card Facing Page 51

Portable Lift

The Oster Mfg. Co. has designed a 500-lb capacity hand-operated, portable hydraulic lift for handling small, heavy loads. The unit can be used as a stacker or a work platform. The carrier comes equipped with a 24 x 24-in. reinforced steel platform that lowers flush to the floor to slide under loads, and has adequate lift height to



reach benches, machine beds, etc. It can be moved easily in crowded aisles, over-the-road carriers, or elevators.

Circle 36 on Card Facing Page 51

Fork Lift Tractor

Pettibone Mulliken Corp. is offering the Cary-Lift, a fork lift tractor with a capacity of 30,000 lb for the log and pulpwood handling field. The new Super 30 has a power shift transmission which completely eliminates the clutch pedal and makes operation faster and easier. Planetary axles provide 4-wheel drive. A new feature is a full 4-ft forward fork reach at every fork height. A precisely balanced frame and large flotation tires



give this new lift the ability to operate over unpaved, uneven yard areas.

Circle 37 on Card Facing Page 51

Covered Hopper Car

Pullman-Standard Car Mfg. Co. has developed the PS-2 covered hopper car of 2993 cu ft capacity, for handling bulk materials. Although covered hop-



per cars originally were used primarily for the hauling of bulk cement, railroads now find the car suitable for carrying more than 100 commodities, from flour and sugar to bauxite.

Circle 38 on Card Facing Page 51

Remote Control Handling

A new remote control has been developed by Lamson Mobilift Corp. primarily for order filling. It permits one man with a truck to work quickly and efficiently. Incoming material can be palletized in box-type pallets and stored to the height that ceilings permit. When less than pallet load quanti-

ties are required for order filling, one man can lift himself to the desired pallet height, remove the quantity of items that he needs, lower himself and go on to get the next item. With

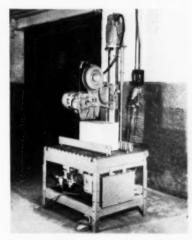


the old method, it was necessary to remove the desired pallet load, place it on the floor, remove the desired quantity and replace the balance of the pallet load. If the pallet were not on the top of the stack it sometimes required that several pallets be needlessly handled.

Circle 39 on Card Facing Page 51

Box Stitching Machine

A new box stitching method, called circuate wire stitching, in which stitches are cut and formed from a continuous coil of wire, driven into both outer and inner flap without mechanism entering the box, is offered by Acme Steel Co. This new system increases production speed and reduces the chance of product damage. Circuate stitches can be used to span the center seam of regular slot-



ted boxes. This reduces the number of stitches required and steps up the rate of closure.

Circle 40 on Card Facing Page 51 (Please Turn Page)

. . . Handling Exposition

(Continued from Preceding Page)

Electronic Scale

A new line of electronic load cell scales is offered by Toledo Scale Co. This gives users the benefits of electronic instrumentation in indicating and recording weights and permits realization of the full accuracy ob-



tainable in the load cells. The scales consist of two main elements: The load cells with platform or load suspension unit, and an electronically actuated servo-type indicating mechanism.

Circle 41 on Card Facing Page 51

Improved Drum Lift

A lift that permits one man to handle loaded 55-gal drums of material is offered by Sterling, Fleischman Co. This lift can be used with either steel or fiber containers of any size. It will lift and rotate to pour or stack and



transport safely anywhere. Small size of this drum lift permits its use in areas where fork trucks cannot enter. Hydraulically operated, it is safe to use in many operations where use of electric or gas driven equipment may be hazardous.

Circle 42 on Card Facing Page 51

Adjustable Steel Shelving

Thumb and forefinger are the only tools needed to install, remove and reposition individual shelves in the new Hallowell Erectomatic system offered by Standard Pressed Steel Co. After the shelf is positioned on supports, four pivoted locks, one at each end of the two shelf supports, are swung into place to engage the lower flange



of the shelf. The result is a firm lock, yet one that can be quickly opened for re-positioning and shelving.

Circle 43 on Card Facing Page 51

Fork Lift Truck

Because of their application for warehouse work, the W series, 2000-4000 lb capacity Erickson Power Lift Trucks combine the ruggedness of the larger Erickson models with unequalled compactness and handling ease for trucks of this range. This series offers a choice of engines. Extra large pneumatic tires on both drive wheels and steering wheels give

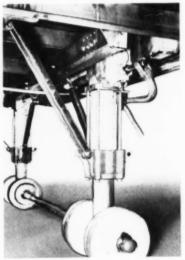


these trucks easy rolling and positive traction on concrete or soft surfaces. High 13 in. underclearance provides for all ramps and rough uneven ground.

Circle 44 on Card Facing Page 51

Vertical Trailer Support

Fruehauf Trailer Co. now is fitting its trailers with vertical supports of improved design. These new supports with two speeds can be changed from one ratio to another very readily. To shift, it is merely necessary to pull down on the gear shift handle under



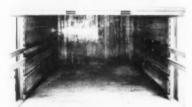
the transmission. The crank of dieformed pressed steel raises or lowers the support. The entire unit is rigidly mounted with scientifically sectioned pressed steel struts.

Circle 45 on Card Facing Page 51

Car Load-Locker

The Evans Quick-Loader, a partitioning and load-locking device for box car shipments of assorted merchandise of varying size and moderate weight, is offered by the Evans Products Co. The fast, easily operated



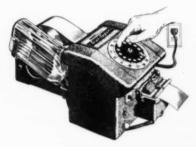


spring-lock bulkhead system can be operated by one man. Two bulkheads allow dividing the load into three sections at any one-inch location throughout the car. When not in use, bulkheads are hoisted to overhead metal tracks.

Circle 46 on Card Facing Page 51

Automatic Tape Dispenser

Marsh Stencil Machine Co. is offering a new electric Dial-Taper which delivers any tape length in any sequence for cartons of mixed sizes. Dial the length of tape, and automatically and electrically the Dial-Taper does all other operations. It



measures tape accurately, cuts tape clean, and moistens tape with warm water. Dial lengths are from 3 to 39 in. Longer lengths may be obtained by two rapid dials.

Circle 47 on Card Facing Page 51

Retractable Power Dock

Hartman Metal Fabricators, Inc. has improved its Model 6000 retractable power dock. The dock is completely protected from possible truck



damage. When it is not in use it can be positioned level with the shipping platform and used the same as the permanent floor. The dock will hold a load of 20,000 lb.

Circle 48 on Card Facing Page 51

Pallet Loader

Beacon Machinery, Inc. is offering a pallet loader which automatically receives cases from a conveyor line, arranges them in a predetermined pat-



tern, and loads them layer by layer onto a pallet which is then ejected as a full pallet load from the machine.

Circle 49 on Card Facing Page 51

Outdoor Fork Lift

A new model Tracto-Lift with 21-ft lift has been added to Ottawa Steel Div., L. A. Young Spring & Wire Corp's. line of out-door fork lifts. It operates over rough terrain not accessible to conventional fork trucks. This high-lift model is recommended for construction work and includes as standard equipment an overhead



guard, shuttle transmission (providing six speeds forward and six speeds reverse), power steering, and hour meter. It is available in three standard models, the TL-50, TL-60 and TL-70 (5000, 6000 and 70-lb capacity respectively).

Circle 50 on Card Facing Page 51

Parts Bin Divider

Bernard Franklin Co., Inc. introduces a parts bin shelving line with flexible, boltless divider parts called Kwik-Lok which adjusts on 1½-in.



centers. A special tension-tite shelf locking divider studs into slots for instant changeability to larger and smaller bin openings. It is available in all standard storage shelf bin combinations.

Circle 51 on Card Facing Page 51

Hydraulic Elevator

A portable battery-operated, hydraulic elevator, with a capacity of 750 lb, a lift of 71 in., and an overall height of 83 in. is offered by Barrett-Cravens Co. The lift is single control



for raising and lowering. The hydraulic lift mechanism is powered by two six-voit automotive type batteries. Battery charging is provided by a built-in charger.

Circle 52 on Card Facing Page 51

Low Profile Building

A new low profile, pre-engineered metal building having a roof pitch of 1 in 12 has been announced by Butler Manufacturing Co. While imparting the general appearance of the modern, flat roof design to the finished building, the new low pitch retains the advantages of a gable roof. The low pitch steel framework can span floor areas up to 100 ft wide without the use of any interior posts or roof trusses. Interiors are wide open, permitting unrestricted layout planning, partitioning, illumination, heating and decoration.

Circle 53 on Card Facing Page 51

Fibre Box Truck

The fibre box truck, a product of the Federal Fibre Corp., is available in all sizes, in drop side or open side models. These units are made of vulcanized fibre with rustproof electro-



galvannealed ribbing and cross-reinforcements.

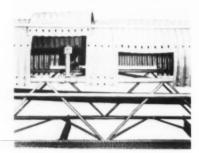
Circle 54 on Card Facing Page 51 (Please Turn Page)

. . . Handling Exposition

(Continued from Preceding Page)

Prefabricated Conveyor

The Joy Mfg. Co's. new Ready-Span conveyor consists of standardized, prefabricated sections of various lengths which are bolted together in any arrangement at the job site to make up the total length required. Each section is made up of four 1½-in. pipe cords connected by ¾-in. pipe diagonals to form a laced frame truss. Vertical diagonals are welded to the cords and horizontal diagonals are bolted to the cords. The resulting truss, squared and tightly bolted, provides a rigid member which is stronger, straighter, and more diffi-



cult to damage than conventional trusses of the same weight. All accessories clamp to the pipe for location as desired.

Circle 55 on Card Facing Page 51

Fork Lift Truck

A. B. Farquhar Div. of The Oliver Corp. is offering the Oliver Super 55 fork lift. Big 12-26 tires are suitable on unpaved yards, roads, etc. With six forward speeds, long hauls are easy, and power steering makes driving safe and easy under heavy loads. Lifting capacity is 4000 lb with both the 8-ft and 10-ft mast models. There



is no counterweight or ballast problem with the built-in counter-weight grille.

Circle 56 on Card Facing Page 51

Portable Lift

Roll-O-Vator is a new portable lift offered by Wm. Christensen Co., Inc. It is designed for use in smaller companies where loading docks are not available. Two large automatically retractable wheels make the unit com-

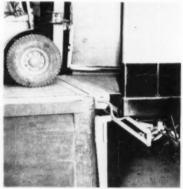


pletely portable to the boxcars or trucks which are required to be loaded from ground level. The design requires no installation other than plugging into an electrical outlet. It is available in three standard capacities, 2000, 4000 and 6000 lb.

Circle 57 on Card Facing Page 51

Power Gate

Daybrook Hydraulic Div., L. A. Young Spring & Wire Corp. has developed a hydraulically operated power gate. It is available in load capacities of 600, 1100, 2000, 3000, and 4000 lb. The unit was designed for applications ranging from pickup delivery trucks



to heavy-duty trucks and trailers handling heavy and bulky loads. For dock loading and unloading operations, the DA series power gate provides platform action from the horizontal loading position to a downward vertical position. This permits backing the truck or trailer against the dock for loading-unloading by fork truck without the use of a dock plate.

Circle 58 on Card Facing Page 51

Industrial Tractor

Completely redesigned Huskie and Super-Huskie gasoline tractors are manufactured by Mercury Mfg. Co. The Huskie (shown here) designated as Models 930 and 940, is available in

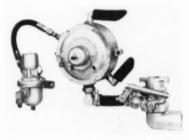


two drawbar capacities and will be rated at 3000 and 4000-lb DBP respectively. The Super-Huskie, Model 950 is available in two capacities, rated at 4000 and 5000-lb DBP. Both models have full spring suspension. All parts have good accessibility. All models use the Chrysler six-cylinder industrial engine with a single-plate 10-in. heavy-duty clutch, fluid coupling, and syncromesh transmission with provision for power take-off.

Circle 59 on Card Facing Page 51

LPG Power Package

Century Gas Equipment Co's. new LP-Gas power package is designed especially for lift trucks. It includes a



new, compact, 3C carburetor which actually is smaller than the gasoline carburetor it replaces.

Circle 60 on Card Facing Page 51

Crawler Tractor

A Drott adjustable pallet fork, shown on this International TD-9 crawler tractor, is offered by Inter-



national Harvester Co. The unit is designed for handling and stacking of heavy and bulky commodities, in outdoor operations.

Circle 61 on Card Facing Page 51

Flat-top Conveyor Chain

A new flat-top conveyor chain that combines a smooth rivet-free nylon carrying surface with precision steel roller chain is available from Link-Belt Co. Ny-Steel flat-top roller chain

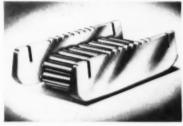


can be furnished with nylon top plates assembled on either heat-treated carbon steel chain or stainless steel chain. It is long lasting, does not stretch, is shock absorbent, and resistant to chemicals and corrosion. It is lighterweight, being less than half the weight of similar all-steel chains.

Circle 62 on Card Facing Page 51

Roller Dolly

Express Roller Div. of Industrial East Co. offers a caterpillar-action dolly to move heavy machinery or equipment. The unit comprises a series of moving rollers locked in an



endless track and extending above and below a heavy steel frame. The frame contains serrated edges which grip and carry the work load being moved. It is available in five ranges of sizes, from 2 to 150 ton capacities.

Circle 63 on Card Facing Page 51

Mobile Communication

Quiet-Line is the latest type of mobile communications offered by Bendix Radio, Div. of Bendix Aviation Corp. It closes the door to all messages but yours. Increases efficiency by reducing the number of misunder-



stood messages. It operates automatically doing away with squelch adjustment and increases fringe area

coverage. Quiet-Line enables the operator to have either tone-coded operation or the conventional squelch system. An off-on switch gives the operator either system he wants.

Circle 64 on Card Facing Page 51

Portable Belt Conveyor

A new aluminum portable belt conveyor, hydraulically adjustable and specially engineered to facilitate unloading, transferring, boosting and stacking operations is offered by the E. W. Buschman Co. The Trojan



Series A conveyor is available in 10, 12, 14, 16, 18 and 20-ft lengths and operates in both forward and reverse. The non-slip belt, 12 in. wide, elevates at angles up to 30 deg without cleats. Cleats are available for steeper angles. Heavy gage aluminum alloy frame and removable undercarriage fold easily, to make this conveyor compact for shipment and storage.

Circle 65 on Card Facing Page 51

Mobile Storage System

A mobile storage system, offered by **Dolin Metal Products**, **Inc.**, makes it possible to have 6, 7, 8 and more rows of storage equipment with only one aisle. This system is accomplished by placing several rows of rolling (mo-



bile) storage equipment on ½-in. high steel tracks directly in front of a fixed (non-mobile) row of equipment, allowing 2 or 3 in. between rows. Access to the rear units is made by rolling the dolly mounted units sideways at any point along the row.

Circle 66 on Card Facing Page 51

Lift Truck

A synchronized 12-volt heavy duty, battery - operated hydraulic lift is available from Big Joe Mfg. Co. The Challenger, model 1056, has a lifting height of 57 in., overall length of 43½ in. and width of 26 in. With load centers of 13, 15 and 18 in., it has capac-



ities of 1500, 1300 and 1000 respectively.

Circle 67 on Card Facing Page 51

Portable Dock Curbing

Magnesium Service Co. has introduced Magserco portable dock curbing, enabling trucks and rail cars to be spotted at any given location along the dock. The curbing eliminates fixed



loading locations, fixed curbing, increases loading efficiency, and reduces operation costs. You can position the rail car or truck, remove one or more sections, stack them upon the remaining one, place dockboard into position and load with complete safety.

Circle 68 on Card Facing Page 51

For prompt service, use postage - free postcard Facing Page 51 to obtain additional information on products described in this section.

All material is FREE.

DA TAN

PRODUCTS

FOR FURTHER INFORMATION

Hand Truck

A balance truck that lifts and carries the load is offered by the Self-Lifting Piano Truck Co. As truck and appliance are tilted, the lock on the wheels is released by foot pressure

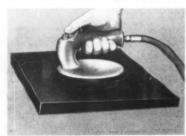


and the wheels roll back into transport position. The full load is balanced, no weight is supported by the operator's arms and he walks in a normal upright position.

Circle 69 on Card Facing Page 51

Vacuum-Lifting Device

International Staple & Machine Co. is offering a vacuum-lifting device known as the Air-Lift. Recommended for lifting and moving all kinds of



bulky, hard-to-handle materials, the portable hand model is capable of lifting up to 200 lb. A vacuum is created as soon as the unit is placed on an object, and remains sealed by means of a neoprene gasket. To release the object, a valve is pressed, breaking the vacuum.

Circle 70 on Card Facing Page 51

Battery-powered Tractor

The Industrial Truck Div. of Clark Equipment Co. is offering a battery-powered tractor that can be used for both pulling and pushing operations in confined areas. This new addition to the Powrworker line of hand trucks has a normal draw bar pull of 200 lbs

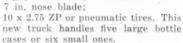


and a break-away rating of 700 lbs. It has two speeds in both forward and reverse and will travel 2 mph fully loaded and 3.2 mph empty. Fingertip control levers are placed on the steering handle. Two models of different lengths are available. The PT-S, for single row battery, is 39¼ in. long, less coupler. The PT-D, for double row battery, is 44% in. long, less coupler. Overall width of both models is 32 in.

Circle 71 on Card Facing Page 51

Two-Wheel Hand Truck

M-H Equipment Co. has available a lightweight two-wheel truck, hand Model TB-21, designed primarily for use by bottlers. It is easy rolling, light in weight (21 lb) providing ease in handling, on and off delivery trucks, and has a rugged tubular steel frame. Overall dimensions are 47 in. high, 13 in. wide,



Circle 72 on Card Facing Page 51

Narrow-aisle Truck

The Lewis-Shepard Products, Inc. line of riding-type electric tiering trucks now is available with a Hydra-Fork attachment to facilitate use of the trucks in extremely narrow aisles. To pick up a palletized load from the floor or a storage rack, the operator of the truck simply hydraulically extends the forks into the pallet. Next, the load is lifted over the load wheels, and forks and load are retracted into the truck. When placing the load in



the storage rack, the truck is positioned facing the rack. The forks are extended until the load is in proper position, the load is lowered into the rack and the forks are retracted from the pallet. Because of this feature, a HydraFork-equipped narrow-aisle truck can pickup and deposit loads in aisles only as wide as the length of the truck and its forks. The Hydra-Fork is available on all Lewis-Shepard Model M and MN electric tiering trucks in capacities to 3000 lb.

Circle 73 on Card Facing Page 51

"Packaged" Building

A new all-metal standard building by Truscon Div. of Republic Steel Corp. comes delivered to site as a package,



with all roofing, siding, windows, doors and hardware included. Economical and quick to erect, the building features roofing and siding of ribbed galvanized panels. To enable the customer to pick his building off-

and EQUIPMENT

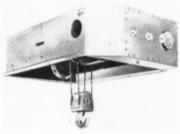
PLEASE USE THE READERS' SERVICE CARD . . PAGE 51

the-shelf, Truscon has factory-stockpiled pre-engineered building components in standard sizes. Widths run 32, 36, 40, 44, or 48 ft, and heights are available in 12 or 14 ft. Length is unlimited, since the building can be expanded by extending either end as the need demands.

Circle 74 on Card Facing Page 51

Heavy-Duty Hoist Line

A new line of hoists, requiring 37 per cent less headroom and offering precision load control to within .008 in., has been announced by R. G. Le-Tourneau, Inc. Compact and lightweight in design, the new hoists are



built for all-weather operation and are available with plain trolley, hand-geared trolley, motor trolley, deck, lug and hook mountings. The minute fraction-of-an-inch load control is achieved through instant torque of the motor and the use of two braking systems.

Circle 75 on Card Facing Page 51

Tote Pans

Stack-n-Nest plexton tote pans molded in one piece of fiber glass reinforced polyester are offered by G. B. Lewis Co. A new size measuring 27 x 16 x 11 in. has been announced. These Stack-n-Nest pans cannot shatter, dent, or bend, are light weight



and resist oil, water, and most chemicals. They cannot rust, rot, or corrode.

Circle 76 on Card Facing Page 51

Rear Dumper

A 600-hp diesel rear dumper for off-highway use, the most powerful single-engine truck in the industry, has been developed by the Autocar Div. of The White Motor Co. With



speed up to 33 mph, and engineered for 40-ton payloads, the new dump truck, a tandem-rear vehicle, has new design features dictated by need for bigness and ruggedness. The AP-40, more than 13 ft high, 31 ft, 10 in. long, and equipped with a 27-cu-yd body, is powered by a V-type, turbocharged 12-cyl Cummins diesel. The 600-hp engine, which has a 30-hp starting motor, gives the truck horse-power-to-weight ratio of 275 to one.

Circle 77 on Card Facing Page 51

Crawler Excavator

Newest addition to the **Koehring** Co's. line of excavators is the crawler-mounted 805. It can be used as a



crane, 2 to 3 cu yd dragline, up to a 3½ cu yd clamshell, or a 2 cu yd shovel. Equipped with friction type steering brakes that are spring set and air power released, it is possible for this model to turn within its own length when one crawler is completely locked.

Circle 78 on Card Facing Page 51

Forklift Truck

Warehouse stockpiling and handling of crated and palletized material are just a few of the materials handling jobs possible with the 34-hp Work Bull fork lift by Massey-Harris-Ferguson, Inc. It operates on or off hard surfaces. With big, high-traction wheels, it can carry material from the factory floor or paved yards to out-



of-doors storage buildings, through sand, mud or snow. This fork lift has a 4000-lb lift capacity with a standard 10-ft mast.

Circle 79 on Card Facing Page 51

Industrial Truck

A one-ton capacity, three wheel, battery powered, flat-bed industrial truck on which the driver stands in



a specially designed cockpit was introduced by The Electric-Car Div., Victor Adding Machine Co. The truck has a built-in charger which may be re-charged from any 115 volt AC outlet. Batteries, motor and drive mechanism all are below the deck leaving it clear and unobstructed for larger pay loads.

Circle 80 on Card Facing Page 51

(Please Turn Page)

DANEW PRODUCTS and EQUIPMENT CONTINUED FROM PREVIOUS PAGE

Platform Walkie Lifts

Automatic Transportation Co. is offering its new Hi-Skid transporter Models WWHY-4 and 6 and WWLY-4 and 6 and platform walkie-type industrial lift trucks designed to transport loads 4000 and 6000 lb carried on skids of varied heights. In the WWLY and WWHY-4 the capacity

Air Tacker

The Swingline Industrial Corp. is offering an air operated tacker capable of firing thousands of staples continuously without reloading. The use of the pneumatic tacker elimi-



nates waste resulting from broken strips of conventional staples. This tacker forms as well as drives a new staple with each squeeze of the trigger. It is fed, much like a machine gun, by a continuous belt of straight precut wires.

Circle 81 on Card Facing Page 51

Powered Cart

A new, compact electric unit has been developed by Borne Co., Inc., to power any type of wheeled cart or truck that now is manually operated. Teamed with hand trucks it provides



a safe, motorized carrier for tools, parts and a variety of other items requiring transportation in plants, terminals, warehouses, etc. It is mounted on standard, semi-pneumatic puncture proof tires and starts and stops instantly. Speed is adjusted to an average walk.

Circle 82 on Card Facing Page 51



Shaw-Box Crane and Hoist Div. of Manning, Maxwell & Moore, Inc., offers two new lines of I-beam trolleys with capacities from three through ten tons. Called the Budgit Hi-Cap trolleys, one line is a push type while the other is hand geared. Both lines eliminate all need for lubrication by featuring life lubricated bearings



throughout. A feature of the trolleys is the use of forged alloy steel wheels with crowned treads.

Circle 83 on Card Facing Page 51

Drum Rack

Artco Corp. has available a new space-saving Rak-A-Tier drum rack. It is 10 ft, 2 in. long, 3 ft, 4 in. high,



3 ft deep, and has a capacity of eight drums. Drum racks for additional capacities are available upon request.

Circle 84 on Card Facing Page 51

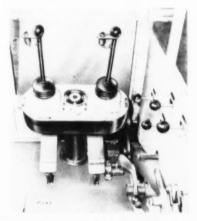


range is 4000 lb up to 54 in. of platform length. In the WWLY and WWHY-6 it is 6000 lb up to 48 in. of platform length. The platform is 6½ in. in the lowered position in the new WWLY models of both capacities and gives a lift of 20 in. The WWHY model's platform is 11 in. in the lowered position and raises loads up to 24½ in.

Circle 85 on Card Facing Page 51

Crawler Crane

The Lorain-26 crawler crane (rated as heavy-duty ¾-yd as a shovel or 17½-ton as a crane) features a new two-level joy stick control that supplies power hydraulically to operate swing, travel, hoist, crowd and re-



tract or power load lowering and boom derricking. The joy sticks reduce operator fatigue, improve control, response and speed. The Thew Shovel Co. unit is equipped with the new internal gear boom hoist which provides a final planetary gear reduction drive to drum of 3.75 to 1.

Circle 86 on Card Facing Page 51

Robot Refrigeration Unit

Carrier Corp. is offering a compact robot railway refrigeration unit, providing temperatures down to minus 10 deg F, for use on long, untended crosscountry hauls. The new unit features compactness, high capacity with low power requirements, automatic defrosting and heating as well as cool-



ing. The automatic equipment is mounted on a panel capable of withstanding severe coupling shocks. It controls both heating and cooling making the unit completely maintenance-free on transcontinental runs. Automatic defrosting provides for quick removal of ice from cooling coils without disturbing the cargo space temperature.

Circle 87 on Card Facing Page 51

Car Shaker

A new car shaker, designed to expedite the unloading of materials from hopper-bottom, open-top, railroad cars, is announced by Eastern Constructors, Inc. This new shaker com-

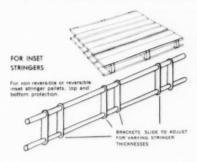


bines the impact features found in car shakers which operate on the top edges of the car only, with the vibration features found in car shakers which hang on the car side and are clamped to the under frame of the car. The action is produced by rotating an unbalanced shaft at 1800 rpm.

Circle 88 on Card Facing Page 51

Pallet Guard

New pallet guards manufactured by Tier-Rack Corp. provide lasting protection for the end boards of standard wooden pallets. They insure the life of pallets against abuses of careless



lift truck operators, create a bumper of steel tubing for the edges of end pallet deckboards and eliminate maintenance on broken end boards. Three other models are available.

Circle 89 on Card Facing Page 51

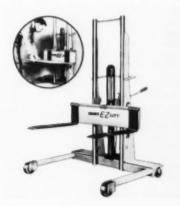
LP Conversion Kit

The Yale and Towne Mfg. Co. has announced the development of the first industrial lift truck LP-gas conversion kit to receive the Underwriters' Laboratories listing for "approval by report" of a field installation. The basic parts of the kit are a fuel tank. a fuel filter, LP-gas converter-regulator, carburetor, solenoid safety shut-off valve, static pressure relief valve, and hoses and connections.

Circle 90 on Card Facing Page 51

Hydraulie Fork Lift

Crown Controls Co., Inc. has introduced tubular steel constructed hydraulic fork lifts and lift tables. The FL-1000 fork truck has a capacity of 1000 lb and the fork spread is quickly adjustable from 11 in. to 34 in. A spe-



cial platform supplied as optional equipment converts the FL-1000 to a lift table in seconds. It weighs only 330 lb.

Circle 91 on Card Facing Page 51

Dock Ramp

The Wayne Dock-O-Matic, manufactured by The Wayne Pump Co., is designed to keep installation costs at a

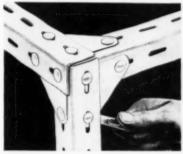


minimum. It requires no piping, special wiring or pit construction and can be operated at a flip of the switch.

Circle 92 on Card Facing Page 51

Slotted Angle Shelving

The Lug-All Co. is offering slotted angle for shelving made from cold rolled steel of a tensile strength of 32 tons psi. One of the features is an



anchor plate which gives rigidity to all structures and eliminates corner bracing. It is available in individual packages that include 10 10 ft x 1½ in. x 1½ in. x 080 in. lengths of Handy Angle, 20 anchor plates and 100 nuts, bolts and washers.

Circle 93 on Card Facing Page 51

Off Pavement Fork Lift

A new fork lift known as an off pavement materials handler because of its extra ground clearance, wide tire



treads, and large wheels is offered by Sherman Products, Inc.

Circle 94 on Card Facing Page 51



LITERATURE

LPG Carburetion

Beam Products Mfg. Co. has issued a six-page folder describing how LPG and Beam carburetion improved fork truck operation nine ways.

Circle 95 on Card Facing Page 51

Powered Handling Equipment

A new 16-page, full-color booklet published by Clark Equipment Co. includes specifications, illustrations, and operating data on the full line of Clark powered materials handling equipment. Presented in detail are gas and electric powered fork trucks, tractors, platform and pallet trucks, straddle carriers, and attachments for all models.

Circle 96 on Card Facing Page 51

Community Development

The Toledo, Peoria & Western Railroad Co. is distributing a brochure entitled "Crab Apple City, U.S.A." The brochure illustrates what can be done in the development of a small community.

Circle 97 on Card Facing Page 51

Pre-engineered Buildings

Butler Manufacturing Co. has published a three-booklet kit on pre-engineered buildings for industrial use. One booklet describes and illustrates pre-engineered warehouses, another treats truck terminals, and the third deals with general industrial buildings.

Circle 98 on Card Facing Page 51

Refrigerated Warehousing

Pioneer Valley Refrigerated Warehouse, Inc., in Springfield, Mass., has issued a four-page folder listing its facilities and services.

Circle 99 on Card Facing Page 51

Modern Distribution

Associated Warehouses, Inc., has announced a new publication called "Industry Speaks." In the booklet eight distribution and industrial traffic managers tell how they use to advantage the modern distribution center facilities of AWI.

Circle 100 on Card Facing Page 51

Moving and Storage

Johnston Terminals, Ltd., announces a new booklet called the "Johnston Terminal Story." It describes Johnston's facilities for carload distribution and forwarding, industrial moving, bulk warehousing, corporation, office, and household moves, and contract trucking.

Circle 101 on Card Facing Page 51

Casters and Wheels

A new caster and wheel catalog, No. C-57, illustrated with photographs and cutaway sections, has been published by The Fairbanks Co. Construction and benefit descriptions and full specifications are provided for Fairbanks' complete line of industrial casters and wheels.

Circle 102 on Card Facing Page 51

Steel Strapping

Articles on the latest money-saving methods of baling waste paper, strapping paperboard containers and coils of strip steel are featured in the Spring 1957 issue of "The Signode Seal." This magazine is published by the Signode Steel Strapping Co.

Circle 103 on Card Facing Page 51

Truck and Floor Cranes

A two-color bulletin, illustrating and describing Tubar truck and floor cranes, is available from Uhrden, Inc. Dimensions and capacities for Uhrden's complete line of hydraulic cranes are listed in the two-page bulletin, plus detailed tables and specifications for truck cranes and eight floor cranes.

Circle 104 on Card Facing Page 51

Hand Lift Trucks

The Association of Lift Truck and Portable Elevator Manufacturers has published a new 16-page booklet called "Mechanical and Hydraulic Hand Lift Trucks."

Circle 105 on Card Facing Page 51

Freezer Wear

A booklet prepared by the Freezer Clothing Sales Co. describes over 50 types of insulated garments for use in refrigerated and cooler operations.

Circle 106 on Card Facing Page 51

Motive-Power Batteries

A new publication, the revision of a complete reference catalog on motive-power batteries, discusses important new features of Exide-Ironclad batteries used in electric industrial trucks and mine vehicles. Published by Exide Industrial Division of The Electric Storage Battery Co., the catalog has new sections on the Silvium alloy used in positive grids, and statistics on the life of Exide-Ironclad batteries.

Circle 107 on Card Facing Page 51

Industrial Wheels

The Hamilton Caster & Mfg. Co. has announced publication of a new 56-page catalog, No. 125, presenting sexpanded line of industrial casters and wheels. The catalog contains illustrations, descriptions, and specification data on hundreds of types and sizes of casters for every industrial requirement.

Circle 108 on Card Facing Page 51

Hand Pallet Truck

A new bulletin describing a one-ton capacity hydraulic hand pallet truck has been issued by The Raymond Corp. The new literature illustrates recent changes and improvements made in the truck. Among the construction features being introduced in the improved truck are a new reinforced handle, relocation of grease fittings for easier servicing, and stronger alloy steel axles.

Circle 109 on Card Facing Page 51

Work Simplification

A new 20-page brochure describing 60 films on the work simplification methods of leading American industrial concerns now is available from the Industrial Management Society. The films may be rented for five-day neriods.

Circle 110 on Card Facing Page 51

Handling Film Catalog

Over 60 material handling educational and training films are offered for loan free of charge by member companies of The Material Handling Institute, Inc. The films are listed in the 24-page, newly revised MHI catalog of "Material Handling Films."

Circle 111 on Card Facing Page 51

Shippers' Guide

A new 1957 Shipper's Guide (Direct Service Point List), showing the more than 2,500 points served by Pacific Intermountain Express in the western two-thirds of the nation, is being distributed. The new edition, which is in a self-contained file folder, includes a large U. S. highway map complete with mileage charts, an explanation of special services offered by P-I-E and other information of interest to the shipping public.

Circle 112 on Card Facing Page 51

Automatic Palletization

"Move it Automatically" characterizes the introduction of new automatic pallet loader-unloader equipment combinations now available for stacking or unloading cartons, bottles and barrels introduced by Food Machinery and Chemical Corp. The FMC Pallet Loader-Unloader, designated as model 408000, consists, essentially, of a case unstacker and a case stacker which have been integrated with the proper control mechanisms into a completely automatic unit.

Circle 113 on Card Facing Page 51

Cotton Compress Truck

A new four-page folder, illustrating and describing the first electric-powered cotton compress truck has been published by The Elwell-Parker Electric Co. Of particular importance is its electric power which provides for 9- to 10-hour continuous operation, yet at the same time, eliminates dangerous gas fumes and fire hazards.

Circle 114 on Card Facing Page 51

Double Coated Tapes

A new brochure describes the advantages and shows uses of two double coated tapes. These are tapes which have adhesive on both sides. Quick and easy to apply, these tapes are used in place of tacks, clamps, glue or cements in many holding, splicing and bonding operations. The brochure is published by the Dutch Brand Division of Johns-Manville.

Circle 115 on Card Facing Page 51

Storage in Motion

A bulletin covering the philosophy of "Storage-in-Motion" — for parts that roll, such as gears, screw machine parts, etc.—is available from Gear-O-Mation Div., Michigan Tool Co. The bulletin (No. GO-561) describes the equipment—storage units, collectors, distributors—as developed by Michigan Tool's newest division. These units make up to a complete demand feeding system for in-line machine operations.

Circle 116 on Card Facing Page 51

Port of Cleveland Directory

The Seaway Committee of the Cleveland Chamber of Commerce has prepared a 20-page booklet containing factual information and illustrations on Cleveland's harbor, a directory of steamship agencies, dock and warehouse operators, and a listing of foreign trade auxiliary services.

Circle 117 on Card Facing Page 51

Standard Racks

A new bulletin, "M-H Standard Racks," has been released by the M-H Standard Corp. Photographs and descriptions illustrate a complete line of racks to handle all types of industrial storage. Included are power driven, manually pushed and stationary racks for live and still storage.

Circle 118 on Card Facing Page 51

Cost Record Book

Truck operators will be interested in obtaining copies of the Cost Record Book issued by The White Motor Co. It provides a comprehensive yet simple system of analyzing truck operating costs and can be tailored to any truck-using business and any size fleet.

Circle 119 on Card Facing Page 51

Dock Coverings

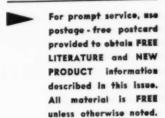
Year round protection of personnel, equipment, and shipments through use of dock covers is discussed in a brochure by Capco. The covers completely enclose the space between the car and building doorway. Fifty-one models are available.

Circle 120 on Card Facing Page 51

BOOKS

Truck Specifications

The DA Industrial Truck Specifications-1957-58, appearing on Pages 67 to 82 in this issue, again have been reprinted and bound as a separate 16-page booklet. The booklet includes vital specifications on some 1,000 different models of industrial trucks. Included are end-loading or straddle carriers, high-lift fork and platform trucks, low-lift fork and platform trucks, non-lift platform trucks, towing tractors, and end-loading (shovel) trucks. Single copies are available at 50¢ each by writing The Editor, DIS-TRIBUTION AGE, Chestnut & 56th Sts., Philadelphia 39, Pa. Prices on quantity lots will be quoted on request.



Floor Pads

A new catalog sheet, illustrating and describing its new line of Flex-O-Rubber floor pads, has been released by Bumpers, Inc. These pads are made with steel channel frames and laminated segments of resilient rubber reinforced fabric. Built for heavy duty service they are available in two standard sizes.

Circle 121 on Card Facing Page 51

Strapping Machine

Acme Steel Co. has prepared a folder describing its F3 strapping machine for steel strapping and packaging operations. Typical applications as well as specifications of the pneumatically powered and electrically controlled machines are shown and described in the new folder.

Circle 122 on Card Facing Page 51

Steel Handling Products

Elizabeth Iron Works, Inc., is offering a folder describing and illustrating some of its all-steel materials handling aids such as bridge and refrigerator car ramps, medium and lightweight hand truck ramps, motor and trailer ramps, etc.

Circle 123 on Card Facing Page 51

Industrial Tires

The Monarch Rubber Co. announces Catalog MR-457, a complete handbook on its line of industrial solid tires. This catalog contains descriptions of standard and special tires, data on comparative performance tests, preventive maintenance recommendations, and size and specification data.

Circle 124 on Card Facing Page 51

Exhaust Purification

A chart comparing the carbon monoxide concentration resulting from trucks operating with standard mufflers and those using OCM catalytic exhaust purifiers has been published by Oxy-Catalyst, Inc. Two trucks were tested over an eight-hour period in an enclosed warehouse measuring 120 x 120 x 20 ft. Results were rated as to percentage of carbon monoxide concentration and danger to humans.

Circle 125 on Card Facing Page 51

What's New On Wheels

New developments in highway equipment emphasizes principles of better performance up front and easier materials handling in the load end. New transmissions, wider cabs help drivers

THE early months of 1957 have seen the development of a new assortment of highway equipment based on the principles of better performance up front and easier materials handling in the load end.

International

One of a variety of trucks in the new International Harvester Company A-line, the A-180, features added driver comfort and ease of handling. Wheelbases range from 129 to 256 in. Power is supplied by a 141-hp engine. Model A-180 is rated up to 22,000 lb gvw and 45,000 lb gcw.

Two manufacturers have introduced a total of 15 new four-wheel drive models this spring.

Dodge 4-Wheel Drive

To the well-established Dodge series, the company has added one bigger model and two smaller trucks. Largest of this Dodge series is the W500, available with either 130-hp six-cylinder engine or 197-hp V-8 engine. Maximum gross vehicle weight is 18,000 lb. The two smaller additions, the W100 and the W200, have maximum vehicle weight rating of 5,100 and 8,000 lb respectively.

12 Chevrolets

Chevrolet Motor Division is now producing 12 four-wheel drive models. They will be available in the suburban carryall, the half, three-quarter, and one-ton pickup;

Chevrolet's new line of four-wheel drive trucks consists of 12 models



For service work, the complete cab, cowl and fender assembly of this Diamond T will tilt forward manually without the use of power



one-ton panel, and three-quarter and one-ton stake truck models.

The power is supplied through a four - speed transmission, then split between the front and rear wheels through a two-speed transfer case. Front wheel drive may be engaged or disengaged at any time without using the clutch, provided the transfer case is shifted into direct drive.

Diamond T

Widespread application in heavy traffic areas is expected for Diamond T's new Tiltcab Model 430C, now in full production. The tilt cab feature, even with a large body, makes for ease or handling and greater maneuverability. It is rated at 20,000 gyw.

Accessibility is another Model 430C feature. It is not necessary to tilt the cab to check the oil or the radiator. An access plate in the floor of the cab is provided for this.

White Motors

Among the new models stressing efficient materials handling is a refrigerated body introduced by The White Motor Co. This 12-ft body is designed to take palletized loads of milk. A dropframe permits excellent weight distribution

and permits easy loading. Two pallets are loaded from the side across the front of the body and two from the rear.

Fruehauf Trailer

The Fruehauf Trailer Co. has introduced an Airslide bulk cement trailer which is unloaded without any mechanical contact with the load. Air from the engine-driven blower seeps through fabric panels to actuate the load, permitting it to "flow" over the tilted panels. The line includes both trailers and semi-trailers. Each is 18-ft in length.

Ford's New Line

Ford's 1957 trucks have $2\frac{1}{2}$ in. less overall cab and front end length to permit larger payload areas. Cabs in many series are $3\frac{1}{2}$ in. wider while ground clearance and turning radius have been improved.

New with the 1957 line is a new fully automatic transmission, the Transmatic, with six automatic forward speeds. The company expects to offer it as optional equipment on F and C medium, heavyduty, and extra-heavy-duty models.

Ford for '57 also has suspended clutch, brake and accelerator pedals. The clutch is hydraulic.•



Ford trucks feature greater ground clearance, improved turning radius



Smallest 4-wheel drive Dodge, the W100, can climb 60% grade loaded

International's A-180 is powered by a 141-hp engine. Gvw is up to 22,000 lb



Fruehauf's twin-panel Airslide bulk transporters can be unloaded without mechanical contact with the load. They are 18-ft long



FOF Story Told at TOC

ATA group elects G. H. Becker chairman, hears industry leaders

THE OPERATIONS Council, American Trucking Associations, Inc., during its Annual Spring Meeting last month, elected G. H. Becker, of Murphy Motor Freight Lines, Minneapolis, chairman.

Other officers elected are:

Saul Burten, Branch Motor Express, Allentown, Pa., first vice chairman; C. H. Wells, McLean Trucking Co., Winston-Salem, N. C., second vice chairman; M. S. Lee, Lee Way Motor Freight, Inc., Oklahoma City, Okla., third vice chairman; G. G. Harney, Pilot Freight Carriers, Inc., New York, treasurer, and James W. Boyer, Washington, executive secretary.

Delegates to the four-day meet-

ing were introduced to a new type of mechanical handling in dock operations. F. S. Macomber, of A. T. Kearney and Co., spoke on his company's experience with FOF—freight on forks.

The basic idea is not new, the speaker said. It has been in use for at least eight or ten years in industrial warehousing situations.

"In attempting to reduce true work and make improvements over the present systems, we have turned to the fork lift truck.... The fork truck has one great basic advantage over the cart. It is capable of loading and unloading itself mechanically and the cart is not." Macomber said.

Until the advent of the rack and

one man fork lift crew idea on motor freight docks, any fork lift system required pallets, according to the speaker. With racks and separate lift trucks for each operator, however, the use of a multifork machine became practical for transferring freight to racks without using pallets.

"This is the basic idea behind FOF.... In stripping a trailer the freight is hand loaded on the six forks just as it would be loaded on a cart or pallet except that the operator has the advantage of changing the fork level up and down at will by using a remote control button... Motion studies show that a 10 per cent savings in package handling time results from having the fork lift truck with the man at all times."

Checks Shipment

"The operator checks his own shipment using an alphabetical bill sorter.... When the shipment has been placed on the forks, he mounts his truck (a standup machine) and moves to the trailer or the rack adjacent to the loading door involved. The six forks drop

Left: Officers are (left to right) C. H. Wells, 2nd vice chairman; Saul Burten, 1st vice chairman; G. H. Becker, chairman; J. L. Burge, retiring chairman; G. G. Harney, treasurer; J. W. Boyer, secretary

Right: With worker pivoting and bending (A) to load pallet, his rate is .107 minutes per piece. Loading to elevated forks (B) rate is .067. As load on the pallet nears stack height, rate drops to .069. With the forks adjusted to new height by remote control (D) rate is .067.



Meeting

in panel discussions

through slots in the cantilever racks leaving the shipment supported by the square tubes which make up the rack.

"When the shipment is needed for loading, this process is reversed. The operator drives to the rack. . . . He picks the shipment up on his forks, drives into the trailer and, whenever possible, deposits the shipment mechanically using his side shifter to bring the shipment snug against the trailer wall.

"Interline shipments brought to the terminal by other carriers' drivers are placed on a special pallet at the tailgate which provides access for the forks. . . . A supply of these pallets is also taken out by the company's city drivers. They bring the larger shipments back stacked on this type pallet to avoid piece handling by the operators during unloading ...," Macomber said.

A pusher plate is used to hold freight in place while loading a highway truck.

All shipments do not lend themselves to mechanical loading. Some must be hand stacked. However, the heavier, more uniform shipments of package freight are particularly adaptable to it.

Experience with the first FOF terminal, the speaker said, indicates that approximately 30 per cent by weight can be pushed off in loading highway trailers (for best use of cube) and that 60 per cent by weight can be pushed off in loading city trucks where cube is not so important.

Speaking before a luncheon meeting, Owen Clarke, chairman of the Interstate Commerce Commission, discussed government's role in transportation.

Government must accept a share of the responsibility for the ills of transportation, the speaker said. Among the aspects of government policy affecting transportation he listed taxing power, government aid, setting user charges for competing government facilities, leg-

islation such as section 22 of the Interstate Commerce Act; state barriers; and regulation.

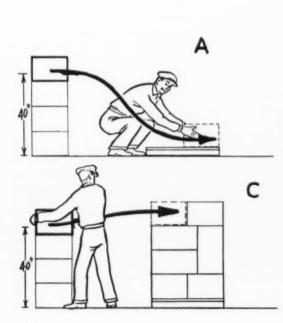
Personnel Problems

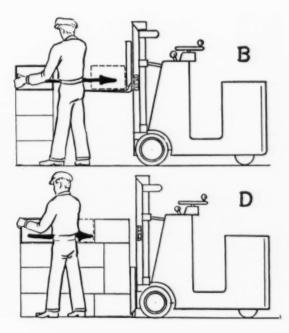
Two of the panel sessions dealt with personnel problems — "Handling Employee Grievances" and "What Operations Personnel Seeks From Top Management." The former was moderated by Benjamin R. Miller, ATA, and the latter by Thomas D. Nicholas, Pilot Freight Carriers, Inc.

N. J. Catsinas, vice president, Denver-Chicago Trucking Co., cited the necessity of establishing adequate channels of communication between workers and supervisors. He warned that "no one knows until the grievance is heard, whether or not workers and management will profit by it."

Reasons given why grievances are not properly handled are: local management's claim that there is no time to process them (in reality they run away from them), local management's claim that the home office does not handle them, other local management employes know they have been in error and do not have the courage to accept responsibility for the error.

Catsinas told the supervisors to: (Please Turn to Page 88)





Preservation of Perishables via Mechanization

ECHANIZATION is playing an increasingly important role in the preservation of perishable products. This fact is illustrated at the Blue Island, Ill., station of City Products Corp., one of the largest and fastest reicing operations of its kind in the United States. Here three new, completely automatic dock-type car icers accelerate the re-icing of about 1,400 refrigerator cars every day during the summer.

City Products operates 154 icing and re-icing stations. The Blue Island station, which lies just south of Chicago, is the largest in their chain. It is located on the Indiana Harbor Belt Railroad.

Manufacture Ice

The plant site at Blue Island covers six acres. The ice manufacturing plant produces more than 200,000 tons a year. Most of the trains re-iced at Blue Island en route to other parts of the country carry highly perishable truck farm products.

A train going from Southern California to New York City will be re-iced at about seven of the more than 500 icing and re-icing stations located at strategic points on U. S. railroads. Some docks are owned by the railroads. Others are operated by independent icing companies. Both measure the efficiency of their docks by the speed with which they can re-ice a train of cars and get it on its way.

Dock Loads 80 Cars

The dock at Blue Island can accommodate 80 cars at one time, 40 to a side. When a train is to be re-iced, 400-lb cakes of ice are conveyed from day storage to the dock and then to any one or all of the three icing machines. These

Re-icing refrigerator cars has become a push-button operation at this Illinois station, where three new, automatic dock type icers service up to 1400 cars a day

machines crush the cakes to the desired size and deliver the ice into the waiting bunkers of refrigerator cars.

The car icer used by City Products is track-mounted and self-propelled. It is about 12 ft high and consists of a pick-up conveyor, a crushing unit, a reversible cross conveyor, and two pivoted discharge chutes which deliver to the bunkers. It is operated by one man, riding on an elevated platform. He has complete control of the entire operation of machine and conveyors.

Icing a Train

Before a train is scheduled to arrive at Blue Island, sufficient ice is accumulated in the day storage for the servicing of the train. After the train has been spotted at the dock, an inspector walks along the tops of the cars. He opens the bunker hatches and determines how much ice and salt should be added. Each bunker holds about three tons of ice (six tons to a car). The crated produce is stowed in the body of the car.

The size of the ice and the amount of salt to be supplied are noted by the inspector. The icer makes three sizes of ice: chunk, coarse or crushed. Different sizes

are required for different products. Lettuce, for example, require chunk ice.

Size Adjusted

By means of instantaneous controls, the operator of the machine can adjust the crushing unit to deliver the required size. The commodity in the car also determines how much salt should be added to the ice. A self-propelled salt machine works with the icer to handle this salting.

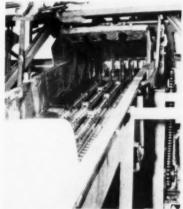
A pickup conveyor on the icer scoops up cakes of ice "on the flat" directly from the dock conveyors. The icing of each car takes only seconds as the machine moves down the dock. A man follows the unit to close the hatches.

Finger-Tip Control

The operator of each machine controls the icing operation. Through a system of hydraulic and electronic controls, he has fingertip control over the icer and the dock conveyor which feeds ice to the machine.

From his station, he controls travel of the machine in either direction. He operates the hydraulic track brakes which permit fast, sure positioning; controls the size of ice and directs it by means of





Above: 400-lb cake of ice about to be reduced to chunk, coarse, or crushed

Left: Icer travels along its own track on elevated dock, ices car in seconds

the reversible cross conveyor to either side of the dock; raises or lowers the discharge chutes to adjust for car height; and operates the flap gates which direct the ice flow into the proper hatch.

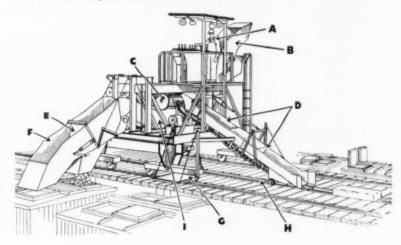
He also controls raising and lowering of hinged section of pickup conveyor to permit ice cakes to pass under the machine.

By means of an intercom system, he has constant contact with ice supply centers in the adjacent ice plant. This way he regulates the flow of ice to the dock.



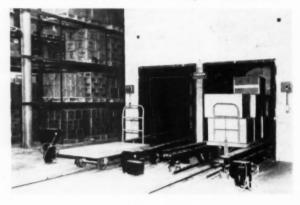
Above: Ice being fed down the hatch of a refrigerated car. The two-bunker cars, with two compartments to each bunker, hold about six tons of crushed ice

Right: Link-Belt Model 55 car icer was designed for typical existing docks. It is adaptable to cars of all heights and hatch covers of all types. With its differential drive, the machine can travel in either direction. It features a hydraulic track brake, a solenoid parking brake, and a hydraulic system for operating chutes, gates, and hinged sections of the pick-up conveyor. Shown in the diagram are: A, one-man control station; B, discharge chute in raised position; C, crusher; D, pick-up conveyor with hinged section; E, flap gate to direct ice; F, discharge chute in loading position; G, bridge to car; H, dock conveyor; I, reversible cross conveyor

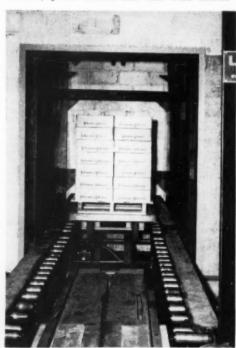


In this new Woolworth distribution center the latest tools of physical distribution, including fork trucks, in-floor truck-drag conveyors, roller conveyors, self-leveling dockboards, an air tube system, and a pair of automatic, elevator-type lifts provide

One side of Lamson-built lift carries loaded carts up to second-floor, other side returns empties to first floor



Each side includes the lift, a 20-ft drag-line section, pallet rollers and side load shields



Storage in

PIRST-IN-FIRST-OUT storage on a fast-in-fast-out schedule is the rule at F. W. Woolworth's new two-story, 350,000-sq ft Bronx warehouse. The latest tools of physical distribution help speed tons of merchandise from the new center to 800 retail stores located east of the Mississippi.

These tools include a punch-code identification system, a fleet of 21 lift trucks, a 2100-ft in-floor truck dragging conveyor, 750 floor and selector trucks, 600 ft of powered roller conveyor, 12 miles of pallet and platform racks, some 19,000 pallets, an air tube system for paperwork transmittal, and shipping and receiving docks equipped with 12 hydraulically operated dock leveling devices.

The rapid flow of goods also is expedited by a unique stock layout system. The entire warehouse is arranged to duplicate the stock location plan followed in all Woolworth retail stores. Thus a shopper looking for a comb in any Woolworth store will find it in the same relative position as the stock selector looking for a case of combs in the new warehouse.

The first floor is used for full-case storage. Broken-case items are stored on the second floor. Of the 7000 items handled, more than 6000 are classified as broken-case. On both floors active storage is in the center of the floor, with reserve storage bordering the area.

Between Floors Handling

Two separate systems are used for the betweenfloor movement of goods. Incoming broken-case goods are carried to the second floor by means of an auto-

Drag line circles active storage areas on both floors. Three types of truck are used—bin, shelf, and flatbed



Motion . . . by the Numbers

matic vertical lift. The elevator-type lift has two sides, one for carrying loaded carts up, and one for returning empty pallets and carts.

The first-floor shipping area connects with the second-floor packing area by a 30-in. live roller conveyor. This unit runs the entire length of the packing room, descends through the floor, and travels along the ceiling until it reaches the center of the shipping room. At this point it descends to the palletizing section for outgoing shipments.

On both floors the active storage areas are circled by drag-chain conveyors. Storage within the areas is on steel pallet racks and shelving. Racks are two and three platforms in height, with each platform supporting two pallets side by side. Using the racks and platforms, it is possible to stack four pallets high on both two and three-platform racks. Two pallet loads are stacked one on top of the other on the two-platform racks.

From 100 to 150 tons of merchandise is received at the center each day, mostly by truck. Usually five men are assigned to unloading. On the receiving dock merchandise is palletized and marked for delivery to either the first or second floor.

Outrigger-type fork trucks are used throughout the warehouse for stacking and destacking and to load and unload orders. This type of equipment, with a $16\frac{1}{2}$ -ft lift, was selected for its ability to maneuver in narrow aisles.

First floor merchandise is placed on flat-bed floor trucks and carried by the in-floor line to the designated storage area. New merchandise is stacked on (Please Turn Page)

Classifier sorts order for a packer on powered roller conveyor. Empty pallets are returned underneath sorting line





Steel pallet racks, manufactured by Artco, permit fourhigh stacking of pallets, removal on first-in-first-out basis

Conveyor descends from packing room on the second floor, carries broken-case items to shipping room





Dispatcher releases an unclassified order, which will move down the spur and out the main line conveyor—note bridges

Storage in Motion . . .

(Continued from Preceding Page)

top of the racks, and stock is worked downward, first-in-first-out.

Merchandise bound for the second floor is stacked on a floor truck and wheeled to the vertical lift. The lift is adjacent to the receiving dock and parallel to the drag line. Each lift—one up and one down—has a 20-ft section of drag line on each floor.

Stock on the second floor also is worked from top to bottom, first-in-first-out. Racks on both floors are designated by department, item, and code number.

Each order is card-punched upon recepit. An invoice is printed in two sections, one section for broken-case items that must be repacked, and one section for full-case items. Receiving tickets are sent to the stock records department for each incoming order.

The stock order book also is punch coded. The book is arranged so that half of it provides a permanent record and the other half can be used as order blanks by store managers. Store managers are given specific dates on which to order. This assures a steady flow through the warehouse.

Outgoing Shipments

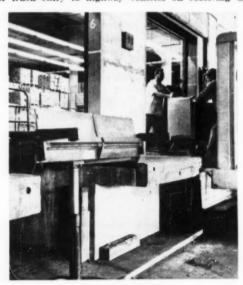
All invoices on outgoing shipments are first processed on the second floor, where broken-case lots have to be repacked. Items are placed on the carts as they circle the rack area.

When the order is completed, the cart is disengaged from the line and pushed to one of 29 packing lines. Eight lines are reserved for unclassified freight, mostly for local delivery, and 21 lines handle classified goods.

As second floor items are traveling the length of the packing line the invoice is forwarded to the first floor, where full-case items are selected. Automatic



Hydraulically activated, self-leveling dockboards permit floor truck entry to highway vehicles on receiving dock



Six Rowe Methods dockboards have been installed on shipping dock, with provisions for four more

control equipment on the packing conveyor helps eliminate lost or split orders. The two halves of each order—broken-case and full-case—are segregated in the first floor shipping room.

In the shipping room the orders are checked and palletized. They then are placed on carts for movement to the shipping dock. Like the receiving dock, this dock is fully enclosed and equipped with self-leveling dockboards. •





Above: Deliveries to the retail outlets, including 360 food chains, are handled by company and independent trucks

Left: Each driver-salesman is required to keep the company-owned display stand in the retail store properly stocked

Physical Distribution Linked to Sales Distribution

Joining physical and sales distribution and merchandising in a single operation, a method new to the field of pet care items, has been largely responsible for growth of one company which entered the field in 1948.

The House of Huston system of distribution and merchandising involves the use of 160 trucks throughout the United States. These vehicles, some companyowned and some independently-owned, make store-door deliveries to most of the firm's 10,000 retail outlets. Drivers service display stands in stores which include several thousand supermarkets. This use of supermarkets has been one of the innovations introduced by the Florida firm.

Starting first with drug stores, pet shops, department stores, and hardware stores, House of Huston added many retailers after providing its own Pal Pet Shop display Manufacturer serves 10,000 retail outlets with 160 trucks operated by driver-salesmen from spot stocks in warehouses over the nation By John D. Horn, Vice-President, The House of Huston

stands. To service its major retailers, including more than 360 food chains, the company maintains warehouse stocks of all its items throughout the country.

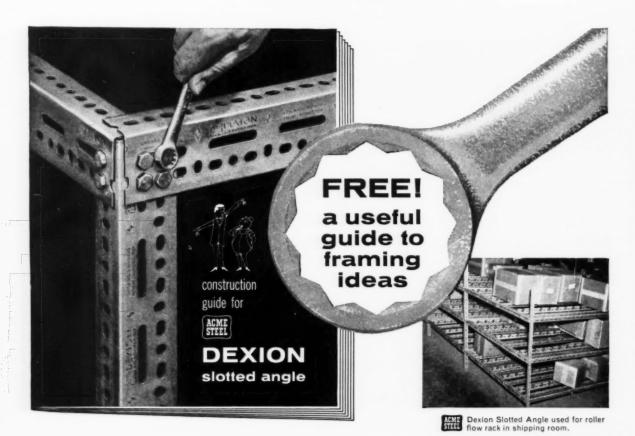
Many of the drug stores marketing the products obtain their stocks from wholesale drug houses.

From these distribution centers, which in the past have included public warehouses and company-operated establishments, trucks

operate on regular routes. The driver-salesmen must supply refills for low stock items and remove slow-moving or seasonal items.

Every salesman is required to carry a route book which shows the amount of the original installation and the rate of turnover of all items. It is the company's aim to provide a turnover in supermarkets nine or ten times a year. If

(Please Turn to Page 93)



Reduce Installation costs frame with

Dexion Slotted Angle

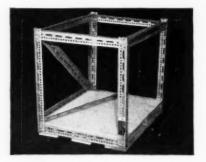
For all installation needs, Acme Steel Dexion Slotted Angle has proved to be the fastest, most convenient framing material available. Dexion Slotted Angle assembles rapidly, easily and always has a slot or hole available for bolts or studs, even for the multiple mounting of components such as those with electrical installations. You can save hours on one installation!

Acme Steel Dexion projects are started and completed—measured, cut and bolted—right at the job site. Embossings spaced every 3 inches simplify measuring, a portable Dexion Cutter shears squarely and cleanly with a single stroke and one wrench tightens all bolts to make strong, permanent frames for any purpose. No drilling or welding, ever.

Cold rolled, galvanized steel Dexion Slotted Angle supports many hundreds of pounds; is available in regular or heavy-duty gauge. Acme Steel Dexion Slotted Angle comes in 10 or 12-foot lengths, ten to a package, with 75 nuts and bolts included. For better Ideas using the simplicity and usefulness of Dexion, write for a free copy of the "Dexion Construction Guide" to Dept. DBD-67, Acme Steel Company, Chicago 27, Illinois.



Dexion Slotted Angle frames and supports conveyorized assembly tables.



Dexion Slotted Angle frames box pallet.



DEXION SLOTTED ANGLE

Circle No. 17 on Card, Facing Page 51, for more information





HEAVY DUTY (Rigid or Swivel)

Practically indestructible, even under heavy shock loads. For power or hand drawn trucks. Double ball raceway swivels. Roller or ball bearing wheels. Capacities from 200 to 1500 lbs. per caster.



MEDIUM DUTY CASTER (with Replaceable Rubber Tire or Non-Metallic Wheels (Rigid or Swivel) Metal Wheels also

Available Durable construction assures long life and easy operation under heavy loads. Capacities from 300 to 400 lbs. per

WAST VERTICAL LIFTING

Colson speeds material handling . . . cuts maintenance costs with fully sealed roller bearing casters

ACCURATELY FORMED and hardened raceways add years of trouble-free service!

> ZERK TYPE fitting for fast, easy lubrication!

At no extra cost. NEOPRENE SEALS protect Se Bearings and Wheel Bearings from water, chemicals, steam and dirt!

> PRECISION BEARING assembly for smooth, silent, easy rolling!

Pressweld caster highly efficient, low cost, lightweight caster . . . ideal for dollies, racks, box trucks, etc. Unbreakable fork and top plate. Capacities to 1500 lbs. per caster. Non-sparking phenolic resin wheels highly resistant to industrial oils and acids

COLSON Quality Casters a complete line to meet virtually every combination of floor conditions, weight and speed requirements! PRECISION ENGINEERED!

Make old equipment roll like new with smooth, silent, easy rolling COLSON casters. Let a COLSON specialist help you choose from thousands of different types to match your present equipment and plant conditions. COLSON swivel and rigid casters are available for light, medium and heavy

duty with forged steel, cast steel, semi-steel, malleable iron, plastic, pneumatic replaceable rubber tires and Mold-on Rubber wheels. They'll save more than enough to pay for themselves by increasing production flow, prolonging floor life and lowering maintenance costs.





eavy duty requirements. Capacities om 700 to 6,000 lbs. per caster PNEUMATIC CASTERS

Perfect for handling fragile products over rough, bumpy floors. Capacities from 220 to 340 lbs.



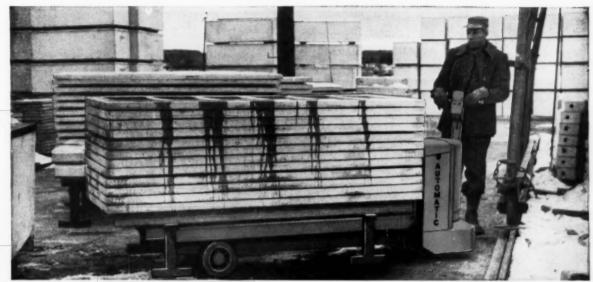
Write or phone for recommendation by specialists

The Colson Corporation : General Offices, Elyria, Ohio

Factories in Elyria, Boston, Toronto

Circle No. 18 on Card, Facing Page 51, for more information





CONCRETE PRODUCTS: Automatic TRANSPORTER above is one of three platform models which work indoors and out, day and night, in all kinds of weather including rain, snow and ice, for the Permacrete Products Corp., makers of precast concrete products.



TAGS & LABELS: This stacker model TRANSPORTER equipped with special paper roll clamp is used by Central Tag Co., to handle and tier 800 lb. paper rolls in storage, also to deliver them to the presses.



VALVES & METERS: Marked improvement resulted in handling finished parts when this TRANSPORTER went to work for Rockwell Mfg. Co. It carries parts from finishing through inspection and weighing to final assembly.

Automatic TRANSPORTER

LEADS ITS FIELD IN COMPACTNESS...

EFFICIENCY...ECONOMY...

Automatic TRANSPORTERS are available in many different types... low and high lift platform...low and high lift pallet...fork, straddle and retractable mast type stackers...tractors. These short, compact, trucks perform all the handling functions of standard rider type trucks yet cost is considerably lower.

In all models, the flexibility, economy and dependability of electric power at its best are combined with many exclusive operating advances. Capacities range from 1,000 to 10,000 lbs. depending upon the model. A complete line of attachments is available.

But see for yourself the superiority of Automatic TRANS-PORTERS. Figures below are for low lift pallet model comparison but other TRANSPORTERS show equally impressive advantages.

CA		SPORTER NO LBS.	TRUCK A	TRUCK B	TRUCK C	TRUCK D
SHORTER	Overall length less load	211/2"	25%	26¾"	23¾*	24"
MANEUVER- ABLE	Maximum Overall width	29"	32"	32"	27"	321/4"
BETTER INCHING CONTROL	3 Speed Control	Yes	No	No	No	No
MAXIMUM HEAT PROTECTION	Class H Silicone insu- lated motor	Available	No	No	No	No
MORE EFFICIENT	Hand or foot lowering control	Both	Hand Only	Hand Only	Hand Only	Hand Only

WRITE FOR SPECIFICATIONS & CASE HISTORIES

Write today for complete information including case histories of installations similar to your own where TRANSPORTERS are cutting materials handling costs to a minimum. And get the facts about Automatic's exclusive lease or purchase plan.

Automatic

Dept. H-7A, 115 West 87th St. Chicago 20, III.

WORLD'S LARGEST EXCLUSIVE BUILDER OF ELECTRIC-DRIVEN INDUSTRIAL TRUCKS

Circle No. 19 on Card, Facing Page 51, for more information



Being interviewed is Curtice C. White, Senior Development Engineer.

"These channels actually cool the battery"

At the Exide Laboratories—Reporter: First, Mr. White, tell me what makes a battery hot.

makes a battery hot.

White: Heavy loads—they often raise battery

Reporter: How do the channels cool it?

temperature as much as 20 degrees.

White: The heated electrolyte rises to the top through the channels. Plates are cooled by electrolyte coming up from the bottom.

Reporter: Don't all batteries have channels?

White: Unfortunately, no. It is the tubular construction of the Exide-Ironclad positive plate that leaves these channels on both sides.

Reporter: What does this feature mean in battery performance?

White: Longer battery life, for one thing. The battery stays cooler. Has less incidence of hot spots. Plates operate at a more uniform temperature.

Reporter: Obviously this is an important feature of Exide-Ironclad.

White: Yes it is, but it's just one of many engineering details that contribute to its high capacity and long life.

Note to battery users: Whenever you order heavy duty batteries or the equipment that requires them, be sure to specify Exide-Ironclad. For detailed bulletin, write Exide Industrial Division, The Electric Storage Battery Co., Philadelphia 2, Pa.

THE ELECTRIC STORAGE BATTERY COMPANY

Exide

Circle No. 20 on Card, Facing Page 51, for more information



INDUSTRIAL TRUCK SPECIFICATIONS—1957-58

Specifications of almost 1000 different models and types of industrial trucks are included in this 16-page section. Due to space limitations, basic models only are listed for each of the firms represented. A multitude of variations, to fit the needs of the individual user, are available.

The entire section, from Pages 67 to 82, has been reprinted in booklet form. Copies can be obtained

at 50¢ each by writing The Editor of DISTRIBU-TION AGE. Quantity lot prices will be quoted on request.

Where tire and wheel dimensions are listed, the following guide should be followed: Solid Molded On:

Tire Outside Diameter x Base Width x Wheel O.D. Tire Outside Diameter x Rim Width Solid Pressed On:

Tire Outside Diameter x Cross Section Width x Rim O.D. Pneumatic Wide Base:

Cross Section Width x Rim Outside Diameter Pneumatic Narrow Base:

Tire Outside Diameter x Cross Section Width Pneumatic Single Tube:

Tire Outside Diameter x Cross Section Width Pneumatic Single Tube (Wheel):

POWERED END-LOADING (STRADDLE) CARRIERS

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ABBREVIATIONS

E-Electric. G-Gas. G-E-Gas-Electric. G or D-Gas or Diesel. H-Hydraulic. Hor-Hercules.

Inter-International.
MC-Mechanical Chain.
NoB-No Bolster.
RP-Rack Phion.
RPr-Ready Power.

POWERED HIGH-LIFT FORK OR PLATFORM TRUCKS

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## POWERED HIGH-LIFT FORK OR PLATFORM TRUCKS (CONTINUED) 70

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	Hyster	Kwik Mix	Lewis-Shepard	Lift Trucks MacDonald	

POWERED HIGH-LIFT FORK OR PLATFORM TRUCKS (CONTINUED)

TIRE SIZES		Steering	Wheels		8.25 16 8.25 16 8.25 16
		Drive	Wheels	21x8 22x8 22x8 22x8 22x8 22x8 22x8 22x8	14.00/24 14.00/24
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URNIN /ith 40"			Inside (In.)	80 0000 881-81- XXX 88 88 88	033
->	(In.)		isT) ebistuO	200 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	888
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		E	Lifting	2.2	150
		Maximum	Mast Extended	2000	185 2 1
	(In.)	Σ	Mast	64 64 64 64 64 64 64 64 64 64 64 64 64 6	22
	Height (In.		Puitting	2222	
SN	-	Minimum	bebnetx3	2222	80
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OVERALL	Under-	ance	Center (In.) At Mast (In.)		2022
	_		Fork (In.) At Truck		555
	Length		Standard		888
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	(10		line of Front Load Center	2	36 44
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œ.	-		Lift		***
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				Mercury— Mobilift Morlift Oliver Ottawa	

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Pettibone Mulliken	Raymond	Revolvator	Silent Hoist	Townstor	Transitier	Iruck-Man	Wright-Hibbard	Yale & Towne

# POWERED HIGH-LIFT FORK OR PLATFORM TRUCKS (CONTINUED)

SIZES		Steering	Wheels	7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 10 7.50 1		
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1,451-600 1,451-	1—Counter balanced. 2—Maximum. 3—Without lond. 4—Counter balancing optional. 5—Non-counter balancing optional. 5—Non-counter balancing. 7—Including battery. 8—Or 36 x 16. 19—Or 36 x 16. 11—30 to 36. 12—With 48* Lond. 13—36 to 48. 14—Including platform or forks.

POWERED LOW-LIFT FORK OR PLATFORM TRUCKS

		Allis-Chalmers	Automatic	Baker-Raulang	Barrett-Cravens	Clark	Colson	Elwell-Parker	Erickson	Kalamazoo	Lewis-Shepard
MAKE AND MODEL		s	LO-2 PE-627 PE-627 PE-627 PE-627 TWE-4 TWE-4 TWE-4 ETWE-4 ETWE-4		PO POK POK PO 401-76 PO 401-126 STF-401-106 STF-401-110 STF-401-130	40LP 60LP 40P 60P	S-4 DFP-4		P5 P7A P7A P10A	301	MN4N MN4N
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INDUSTRIAL TRUCKS-TOWING TRACTOR TYPE

	Sizes	Driving Wheels	8.25.20 8.25.2
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	Type	Driving Wheels	88888888888888888888888888888888888888
	-	Steering Wheels	######################################
		Coupler	000 G POOR POOR POOR POOR POOR POOR POOR PO
GRAD- ABILITY Per Cent		At Rated Load	100 100 100 100 100 100 100 100 100 100
Peg		Unloaded	222227777777777777777777777777777777777
	led th	Reverse	000 € 4400 € 60
	Loaded	Forward	ರಾಗತ್ತಗಳು ಬಳಗಳುಗಳು ರಾಗು ರಾಗುಗಳು ಕನಕಾರ್ಯಗಳು ಕಾಲಕಾಗಳು ೧೦೦೦ ——ಬ ರಾಗಕಾಗ
SPEEDS	pep	Reverse	00000000000000000000000000000000000000
SPI	Unloaded	Forward	202020111111188888888888888888888888888
	-	Number of Reverse	
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(5 É		oleiA gnitoserotni	86888888888888888888888888888888888888
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RAL	RADI	obistuO	17777777777777777777777777777777777777
	er-	Lowest Point	
	Under- clearance	At Truck Center	<u></u>
DIMENSIONS (In.)		Height Teering Wheel	***************************************
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DIM		Length Overall	\$25.55.55.55.55.55.55.55.55.55.55.55.55.5
		Wheelbase	222222
ERY		Ampere Hours	66060 % % % % % % % % % % % % % % % % %
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		Drawbar Pull (Lb.)	7500 990000 990000 990000 990000 990000 990000 99000 99000 990000 990000 990000 990000 990000 990000 990000 9900000 990000 990000 9900000 99000000
		MAKE AND MODEL	HB-36 HB-80
			Alis-Chalmers Automatic Automatic Baker-Raulang Barrett-Cravens Clark Kalamazoo Lewis-Shepard

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3	Gasoline or LPG engine. -Grip tow. No or none. Optional.
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Lift Trucks Mercury. Revolvator Townotor Yalo & Towne.	ABBREVIATIONS 4 255 1—Including battery. 6 C(2 2 30 to 35. 7 1.1.

POWERED NON-LIFT PLATFORM TRUCKS

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INTEGRAL FRONT-END LOADERS (Shovel)

	Pull (Lb.)	Max. Drawbar	15970 26910 60000 65000	3000 3000 5530 590 590 11200 11200 11860 27000 30700	:::	2000 4000 6000 9500 14000		9498 12186 12456 12756 15330			
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		Clearance under Hinge Pin (In.)	120 139 147 160		119.6 128 141½	79 115 115 123 132	78 106 120 121 121 121 152 152	139 139 ¹ / ₂ 170 141	72 72 123 123 121 121 139	no.	
	Max. Dumping Clearance (In.)		96 114 124 126	99 99 106 106 110 110 113	95°4 99°4 111°5	98 98 98 102	621/2 621/2 933 94 108 118 118	98 132 109 106	53 96 97 98 108	D. Diesel. FG—Friction clutch in combination Fr—Friction. G-Gasoline.	
	Carrying Capacity (Lb.)					1500 3500 4000 4000 5500 7500	2000 2000 3000 3000 4000 4000 5500 7500 7500	5500 7500 7000 8000 10500	2100		
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OVERALL DIMENSIONS	Track Length on Ground (In.)		83 1 1063 116 129 1	57 57 57 57 57 57 57 57 57 57 57 57 57 5	74 83 1037	ZZZZZZ	ZZZZZZZZZ		ZZZZZZZ	orp.	
		Wheelbase (In.)		75,2	54	51 75 75 80 88	48 60 68 82 82 85 85 85 91	8 8 8 8 8	48 72 72 84 81 81 81	Div.	
	LENGTH (In.)	Bucket at Carrying Position		186 156 162 162 162 174 174 204 204		127 202 202 202 218 242	120 120 166 196 196 204 228 228	233 243 245 245		AC—Alis-Chalmers, Div. Aut.—Automatic. Cont—Continental Motors Corp. Cony—Conventional.	
		Bucket on Ground	181 209 232 254	171 153 153 165 189 189	166 181 14 2041/2	128 196 196 214 236	123 123 200 200 200 200 233 233	224 234 248 236 2491,5	115 163 177 178 178 219		
	WIDTH (In.)	Outside Front Tires or Tracks	78 957 104 109	268933112		465. 77.72 75 80 86.5 97.5 97.5	50 50 62 77 72 88 88 88 88 88 88 88 88 88 88 88 88 88	76 87½ 87½ 97	53 77 77 77 77 77		
		Outside Rear Tires or Tracks	78 9578 104 1097 ₅	78 68 68 68 68 68 68 68 68 68 68 68 68 68	70 80 96	4214 69 7777 82 861 9712	44 44 77 77 77 80 80 93 93 93 93 93 93 93 93 93 93 93 93 93	988 888	888 888 881 881 881 881 881 881 881 881		
	Height (Highest Point, Bucket at Ground Level) (In.)		888 889 889 889 889 889	663 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	75 8 82 8 87 3 4	88 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	88 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	98 85 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	44444 44444	p v	
Type			٥٥٥٥	55000000000000000000000000000000000000	٥٥٥	****	******	****	******	d tire	
MAKE AND MODEL			HD-6G HD-11G HD-16G	PRIL CONTRACTOR OF THE PRINCE		128 758 758 754 1254		125 175 200 200 250		dable. iquid filled ard equipm	
			Allis-Chalmers H	Саѕе	Caterpillar	Clark	Hough	Pettibone-Mulliken	Tractomotive	1—Gasoline engine available. 2—Weight includes liquid filled tires which are shaded equipment. 3—Weight includes liquid filled tires.	

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Selection . .

(Continued from Page 36)

tion with hard or soft rubber tires.

Malleable iron wheels, as shown in Fig. 2, are made of high-tensile strength material. They offer stiff resistance to breaking or cracking under severe shock. These wheels feature a high load limit and are adaptable for use on rough floors, over railroad crossings, or under other rugged conditions at low speeds. They are available in allmetal and rubber-tired models, with a range of optional bearings selections.

Semi-steel wheels (Fig. 3) are made as castings. They are not suited for severe shocks. They prove useful, however, on fairly smooth floors and have the advantage of relatively low initial cost. This wheel also is available in all-metal and hard or soft rubber tire models.

Aluminum wheels (Fig. 4) usually are without spokes and are manufactured in both metal tread and hard or soft rubber tire models. They are light-weight and non-sparking.

With the groove-type metal wheels shown in Fig. 5, the difference is chiefly in the tread. Grooves are designed usually in an inverted "V" shape. These wheels may be used both on and off rails, as in assembly-line operations.

Another type wheel, illustrated in Fig. 6, is designed for use with semi-pneumatic rubber tires. These wheels consist of two flanged sections which are demountable for tire installation or replacement.

The final standard industrial vehicle wheel, similar to those used on automobiles, is shown in Fig. 7. It is available with either a flat base or drop center rim. These now are standard without spokes. Variations are available in hub mounting, including demountable, semi-demountable, integral hub, and end-axle.

The type of hub used chiefly depends on the bearings specified. Hub dimensions themselves, however, should not be neglected. In addition to the hub-wheel mounting variations described for pneumatic tires, there are tubular and extruded hub styles for use on other wheels.

While hub diameter is determined by bearing specifications, and bearings determined partly by axle styles, hub length is of primary consideration. The greater the length of the hub, the greater the bearing surface that can be accommodated to sustain total load and to ease friction. Hub caps or seals which provide extra protection for bearings and lubricants from dirt and water usually are desirable.

Choice of Bearings

Ease of motion—affecting load size, speed of movement, and manpower required—is determined more by the efficiency of the bearings than by other factors.

Plain bearings, as shown in Fig. 8, are recommended for light loads or limited use. These usually consist of either a cast iron wheel center bored to correct axle size, or an inserted oil impregnated bronze or fused metal bushing.

The straight roller bearing type (Fig. 9) has a split sleeve into which the complete assembly is inserted into a machine wheel center. The bearing roller actually rolls on the axle shaft or inner bushing. This leads to excessive wear unless a hardened shaft or bushing is used.

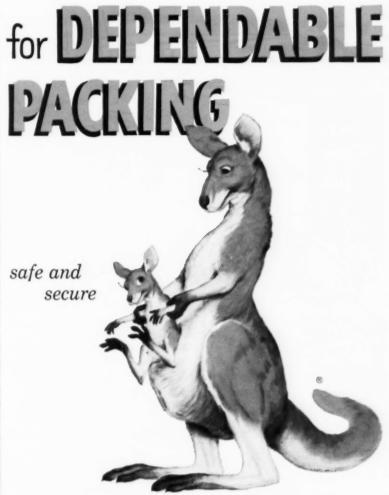
Needle bearings (Fig. 10) operate in a manner similar to the straight roller units. However, the needles, or small rollers, are encased in an outer shell. This is another type best suited to light loads rather than rugged duty.

The ball bearing unit shown in Fig. 11 provides a maximum reduction of friction as long as its size corresponds to the loads it carries.

Tapered roller bearings (Fig. 12) parallel the efficiency of ball bearings in overcoming friction while carrying heavier loads. They also are highly effective in absorbing end-thrust friction, which happens when a load tips sideways.

Since some bearings are lubricated by oil, and others by grease,

(Please Turn Page)



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Selection

(Continued from Preceding Page)

with or without pressure, maintenance problems depend on the length of wheel motion, temperature, and exposure. Style of bearings also is determined in part by the shape of the axle, which can be straight or tapered.

Wheel Outer Covering

Some types of wheels include the outer wearing surface as an integral part. With other wheels this part is used as the actual wearing surface or as the rim for carrying a tire.

On wheels with a flat outer rim, solid rubber tires may be applied. In some applications the tire simply is molded to the rim. Some solid rubber tires, however, are cured to a separate rim. This, in turn, is pressed over the wheel rim itself.

Solid rubber tires are sized in fractions of inches, such as 4 x 1½, and marked accordingly. The first number refers to overall outside diameter, the second to rim width. If three dimensions are marked, the first is overall outside diameter, the second tire width, and the third, the tire or rims' inside diameter.

Solid rubber tires are available in standard cushion treads, soft treads, oil-resistant compound, static conductive, fibre-type tread, and hard compound tread.

Semi-pneumatic tires are marked similarly. These tires have a hollow center. This increases compressibility of the rubber somewhat. Such tires have a load-cushioning effect similar to pneumatic tires, but require greater power for the load-pull. Of course these tires have the advantage of being puncture proof and never in need of inflation. As with all rubber tires, however, they are subject to injury by contact with sharp objects. They also may deteriorate with excessive exposure to grease and acids. Semi-pneumatic tires are available in three main types -light duty, heavy duty, and extra heavy duty.

Demountable solid tires have a thick tread, with a round or flat shaped reinforced base which fits

the wheel contour, as illustrated in Fig. 13. The assembly is made up of two piece wheels, the tire, and a roller bearing. New tires can be replaced easily.

Hard rubber and hard rubber center with soft tread wheels are used for applications such as furniture, domestic appliances, institutional and light industrial equipment. These are shown in Fig. 16. They are molded for plain, oillessbronze, ball and/or roller bearings. They are manufactured in many grades of tread and hard rubber compounds. Hard rubber tires with soft and hard tread also are available for special applications, such as non-marking, staticconductive, and resistance to oils.

Plastic wheels (Fig. 17) are designed for light and heavy service. For light service thermo-plastic or thermo-setting materials are used with or without bearings. For heavier service a thermosetting material is used either with a macerated fabric or laminated construction. This acts as a bind and adds resistance to

shock. Heavy duty plastic wheels are used where heavier loads are required and floor protection is not a factor.

Pneumatic tires for industrial trucks feature the same design principles as automobile units. They are furnished with separate inner tubes or tubeless.

The tires shown in Fig. 14 are available with a wide base or narrow base, and in flat base and drop-center types. Tires and rims must match. Wide-base sizes use three size markings-overall diameter, cross-section, and rim diameter. Narrow-base tires use only two markings, cross-section and rim diameter.

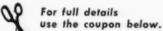
There are various types of pneumatic tire treads (Fig. 15). The all-purpose type is for general use, for easy operation in low or highspeed applications. The traction type provides maximum traction on drive wheels under normal conditions. The cleated or bar type is designed to provide maximum traction in fields or on soft terrain.

(Resume Reading on Page 38)



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JUNE 1957

FOF Story Told.

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A. Ewing Greene, Sr., vice president, Mason and Dixon Lines, Inc., Kingsport, Tenn., said that handling grievances on an area contract "presents the most difficult and complex problems in labor relations."

These problems, he said, include the tendency of area group contracts to restrict flexibility of operations, "because such contracts are predicated on the theory of uniform application to all signatories to the particular contract." Yet the motor truck companies covered may range from small. local operations to the largest companies, whose operations "often span a good portion of the nation.'

Frank Wessell, of Huber and Huber, substituted for Nate Amend, of Union Freightways, on the personnel panel.

The terminal manager seeks from top management respect and appreciation of the many problems that encompass local terminal operations, Wessel said. To conduct a successful terminal. management teamwork is vital.

Management must be a good listener and his employes must realize this if the vital flow of communications upward is to reach the degree of effectiveness that is so important to the wellbeing of any enterprise, according to Thomas J. Clarke, of the R-C Motor Lines.

After the company has heard the complaints or criticisms it must act on them, said Clarke. "Failure to act on undesirable conditions that have been previously reported can only result in the loss of faith in both the sincerity of management and in the value of the communication."

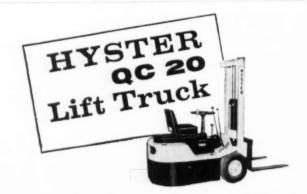
Clarke quoted authorities in the field and summed up their recommendations as:

You must know what you want; You must know what it takes to get the message across:

You must have properly conditioned and receptive people;

And you must follow up to insure that action results.

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WISCONSIN MOTOR CORPORATION

now does in the decisions of trucking executive staffs, J. W. Kasmaier told the delegates.

Kasmaier, Paterson, N. J., manager, Interstate Motor Freight Systems, Inc., warned that "we must find a means of bridging the ever-widening gap between the terminal operation level and the management level and keep open a line of communication through which field experience can be fed back to the staff."

H. E. Schaibly, vice president-treasurer, Interstate Motor Freight System, Inc., spoke on systems of costing reports and controls for dock operations.

Labor should be subdivided between direct platform wages, holiday pay and vacation pay. Direct wages could be further subdivided between supervision, freight handlers, and checkers if your particular dock operation should warrant the breakdown, Schaibly said.

Likewise, overtime pay should be so segregated so it can be controlled. Our reason for segregating holiday and vacation pay is to eliminate these figures in statistical computations as no work is performed for this payment.

The above data, according to the speaker, will accomplish half of a cost study. Next question is "What Did I Get for the Money?"

There are many statistical procedures in answering this—hours worked, weight handled on platform, pounds per manhour, number of shipments handled on platform and average weight per shipment, and cost per hundred pounds platformed.

Prototype Terminals

Speaking on "Prototype Terminal Layouts," C. G. Zwingle, of Pacific Intermountain Express, said he doesn't believe it is possible to have a true prototype terminal layout. There are too many variables—type and volume of freight; percentage of truckload lots as opposed to ltl; amount of freight to be floored; relationship between inbound and outbound tonnage; and freight handling system.

R. C. Williams, president of American Trucking Associations. Inc., told the delegates that "the major problem is that we are coveted by our competitors." The trucking industry will continue its opposition to railroad moves to gain ICC sanction for limited trucking rights and then broaden these into general truck operations, Williams said.

Austin J. Tobin, executive director of the Port of New York Authority, said that a comparison of our transportation problems of 36 years ago "with the problems as we see them today gives us a measure of the revolutionary force of the motor vehicle." He said

that growth and prosperity of the metropolitan region in the new era of the motor vehicle "has been made possible by the expressway, parkways and other arterial improvements that have given us passages through" this surrounding complex of cities.

Average daily attendance at sessions exceeded 200. Total registration was 257 with about 100 area operators also taking part in the meetings.

(Resume Reading on Page 56)



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Chuting the News . . .

(Continued from Page 13)

Customs Brokers & Forwarders Elect New Officers

Martin A. Kerner, of Heemsoth-Kerner Corp., was elected president of the Customs Brokers & Forwarders Association of America last month at that group's Annual Meeting in New York.

Other officers elected were: vice presidents, A. V. Biegen, of Caldwell & Co., and Samuel Shapiro of Samuel Shapiro & Co.; secretary, W. I. Freedman, of Freedman & Slater, Inc.; treasurer, G. M. Colombo, of Behring Shipping Co.; directors, Chairman, W. L. Mercer, of Hudson Shipping Co.; H. S. Dorf, of Dorf International, Ltd.; C. Happel, of Charles Happel, Inc.; W. R. Keating, of W. R. Keating & Co., Inc.; A. J. Pascale, of Universal-Transcontinental Corp., and F. A. Hult, of J. E. Bernard & Co., Inc.

AST&T Admits 243 New Members

Virgil D. Cover, director of education for the American Society of Traffic & Transportation, has announced that the Society's January examinations brought 243 members into the group. Of the 306 candidates who took the examinations, 63 failed. The next examinations will be given June 20-21.

Prizes totaling \$600 are offered in the 1957 Silent Hoist and Crane Company Material Handling Award competition. The competition is sponsored by the Wunsch Foundation and administered by the American Material Handling Society, Inc. Papers may be written on any one of three subjects. Details are available by writing to AMHS headquarters, 3737 Upton Avenue, Toledo 13, Ohio.

Club Briefs

H. S. Cullman, honorary chairman of the Port of New York Authority, was honored as Man of the Year in Foreign Trade at the last meeting of the Foreign Trade Society and Propeller Club of City College of New York.

W. H. Meserole, Philadelphia distribution consultant, spoke at the May 7 meeting of the Syracuse, N. Y., Chapter, AMHS.

Principal speaker at the May 22 meeting of the Port of Buffalo Propeller Club was Leonard F. Nichols, comptroller, Federal Maritime Board.

Maxwell Powell, national recorder of records, Delta Nu Alpha, spoke at the last meeting of the Traffic Managers Institute Alumni Association of New York.

John J. Chapuran, Tidy House Products Co., has been installed as president of the Omaha (Neb.) Traffic Club.

At its second organizational meeting, on May 16, the Traffic Club of Palm Beach County, Fla., heard Col. George W. Peterson, commander of the Palm Beach Air Force Base.

George H. Supple spoke on "Transportation of Oil" at the May 4 meeting of the Los Angeles Transportation Club. He is vice president and director of transportation for General Petroleum Corp.

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"MAGIC CARPET" TO WESTERN MARKETS

If your profit margin in the fabulous western market is being slashed by inefficient storage, shipping, and delivery—make Encinal your choice. There are good reasons why—Encinal offers *complete terminal facilities* (everything you would want from your own branch office).

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ENCINAL... 750,000 sq. ft. of modern warehouse space in the *best* Central Location on the Pacific Coast—on the mainland side of San Francisco Bay.

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Legislative Line-up

Following is a brief summary of legislative items pending in Washington. The status reported is as of May 15.

APPROPRIATIONS — Fiscal 1958 appropriations bill (HR 4897) for Treasury and Post Office Depts. is reported out by Senate Appropriations Committee. The committee still has Commerce Dept. (HR 6700) and Labor Dept. (HR 6287) bills in the works.

FOREIGN FREIGHT FORWARD-ERS—No action is taken by the House Merchant Marine Committee on HR 479, to require foreign freight forwarders to be licensed by the Federal Maritime Board.

GOVERNMENT COMPETITION— HR 1975 remains under consideration by a House Government Operations subcommittee. This measure would define government policy on the extent of federal competition with private business.

HIGHWAY BUILDING—Gore subcommittee of the Senate Public Works Committee takes up Indiana right-of-way acquisition question in mid-May. Hearings on billboard locations also are scheduled. House Public Works has not taken up highway bills.

POSTAL RATES — Higher rates for first-and third-class mail are approved by the House Post Office Committee. In mid-May, the committee is considering proposed increases in second-clas mail rates

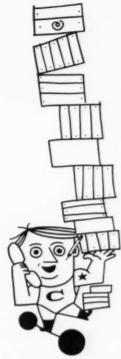
SET NDARY BOYCOTTS — Senate Labor Committee lists no action on S 76, to prohibit secondary boycotts and "hot cargo" contracts.

TERMINAL TRAFFIC—HR 2229 is tentatively scheduled for hearings before the House Merchant Marine Committee on May 28. It is designed to steer more government-generated traffic through commercial marine terminals.

TRUCK ROUTES—Hearings on HR 1066, calling for reasonable through rates for common carrier truck lines, are concluded by a House Commerce group. No additional action is indicated yet.

TRANSPORT POLICY—Senate and House Commerce Committees have no action listed for S 1457 and HR 5521, the bills proposing revisions in national transportation policy.

TRANSPORTATION OF EXPLO-SIVES—S 1491, to bring up to date provisions of the Transportation of Explosives Act, is passed by the Senate. It would extend coverage to contract and private carriers, as well as the common carriers now covered. Partnerships are specifically brought within provisions of ICC regulations on explosives, under terms of the bill.



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COOKE personalized service speeds products to markets—cuts your cost, raises your profits through individual solutions to your particular warehousing, transportation and physical distribution problems. 30 years a leader in public merchandise warehousing in the world's greatest distribution center! Unsurpassed in specially-trained personnel, methods, equipment and facilities! Write today for detailed brochure.

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Frequent, scheduled shipments call for "reserved space". It assures dependable delivery, and space when you want it. Continental offers "free reserved space" on the world's fastest airliners . . . DC-7Bs. Call Continental, or your nearest airfreight forwarder.

Continental AIRFREIGHT



is saving time for NEIMAN-MARCUS

Company official says,
"Lift Gates are definitely time-savers."

If you're interested in cutting delivery costs, take this tip from Marlin Davis. He's the gentleman in charge of the warehouse and delivery trucks for Neiman-Marcus, famed Dallas store of high fashion.

Mr. Davis has used the same Anthony Lift Gates since 1942 . . . their upkeep has been "nominal." Daily deliveries between the warehouse and both Neiman-Marcus stores have proved the Lift Gates especially necessary due to the absence of a loading dock at the downtown store. Heavy, awkward merchandise is rolled or pushed onto the Anthony Lift Gates by only one or two men. There's no time wasted in waiting for additional men to help load or unload. With no manual lifting involved, the chance of costly damage to merchandise is radically reduced.

See for yourself how efficient and economical an Anthony Lift Gate can be . . . with your deliveries! Write for complete descriptive literature.

Buy the lift gate that has the service

Anthony Distributors are located from coast to coast ready to help you solve your delivery problems. Write today for a complete Anthony Distributor list.

ANTHONY 5-POINT PLAN TO LOWER DELIVERY COSTS

- Increase the number of deliveries and reduce fixed costs per delivery.
- Strengthen reputation for faster, improved service.
- Increase earning time of trucks and earning power of men.
- Cut standing time waiting for consignee help.
- Reduce the danger of damaged goods (and disgruntled consignees).

WRITE: 1758 BAKER ST.

ANTHONY COMPANY STREATOR, ILL.

Circle No. 25 on Card, Facing Page 51, for more information 92

Washington DA . . .

(Continued from Page 25)

he says, it's hard to see how the confusion can be remedied.

ARGUE RADIO USE—Surface carriers are taking part in current government hearings covering microwave transmission. Railroad, trucking, and waterways groups' viewpoints will be presented to the Federal Communications Commission. The FCC is gathering testimony from many sources on recommended use of frequencies in bands above 890 megacycles. Hearings are expected to continue until the first of August.

NAVY LIKES NYLON — Nylon nets are proving effective in military cargo handling operations. They're described by the Navy as having one-fourth the cube and one-third the weight of manila nets of comparable capacity. Slotted webbings provide very strong mesh and frame intersections. According to the Navy account, nylon cargo nets are flexible and durable, can be stored safely when wet, and are easily handled by one man.

BACKS FINANCE ROLE—Financial jurisdiction over rail lines should remain in ICC hands, a railroad spokesman informs a House subcommittee. G. W. Glenn, vice president for law, New York Central System, contends that the job is not one for the Securities and Exchange Commission. The ICC, he says, has greater control over railroads than SEC has over industry in general. As he sees it, a switch of authority would not aid the public.

BLAST JUDGMENT BAR — Barge operators, as well as the ICC, object to HR 5523 and 5524. Both bills would bar the ICC from considering whether proposed freight rates would damage other carrier modes. Railroads favor this curb, but John O. Innes, of Chicago, urges Congress to deny it. He argues for 10 common carrier barge lines that the change, while giving railroads more revenue, might break the barge companies.

(Resume Reading on Page 29)



. . . Sales Distribution

(Continued from Page 61)

a store fails in this standard after a trial period, a smaller display stand is substituted.

The driver-salesman must know the characteristics of each market, such as whether the bird population greatly exceeds the number of dogs and cats. Salesmen's route sheets are checked once a month by supervisors and division managers to see that volume is maintained at or near original estimates, and that service is adequate.

In this distribution plan, the manufacturer becomes the rack jobber. He handles warehousing, price marking, delivery of goods, and removal of slow movers.

Not all of the company's manufacturing is done in its own plants at Coral Gables, Fla., Los Angeles, and Newark. Concentrates for many of the liquid products are made in Florida then shipped to contract bottlers in other sections of the country for dilution, bottling, labeling and shipping. In this way the business has been able to overcome some of the freightrate disadvantage which results from having production facilities a long distance from major markets.

(Resume Reading on Page 67)

Do You Know

that the ROCK ISLAND LINES serve

14 midcontinent

states?



—that in this fabulous territory the Rock Island has made an intensive study of industrial possibilities; that this material has been collated, indexed and filed for ready reference; that it includes such data as markets, raw material supplies, labor, housing, climate, transportation; that you, Mr. Industrialist, may have as much of this information as you wish, confidentially and without charge, simply by addressing



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BARRETT

Guide-O-Matic

system that moves loads anywhere...automatically



GUIDE-O-MATIC ...

THE LATEST DEVELOPMENT IN MATERIALS HANDLING.

needs no operator

- No permanent floor chain
- No overhead conveyor

Choice of 4 low-cost guidance methods:

- 1. Wire "in the floor"
- 2. Wire "on the floor" with tape
- 3. Wire overhead
- 4. Optical guideline

GUIDE-O-MATIC is new...cost saving...adaptable. No operator is needed to guide it along any route. Routes are pre-set—can be changed or added to at any time. Safe—will not stray from path. Bulletin 566 gives complete illustrated information.

BARRETT-CRAVENS COMPANY

604 Dundee Road . Northbrook, Illinois

BARRETT

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93

what are you doing about your small shipment problem? ASK THE MAN FROM CENTRAL



REVOLVATOR CO.

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Circle 27 on Card Facing Page 51

AMHS Sees Handling .

(Continued from page 39)

Odell listed the dangers from which goods stored outdoors need protection—weather, handling, fire, pilferage, and loss. He then discussed both temporary protection and reusable covers.

Franing said that "in a metal working industry the amount of outdoor storage that can be carried on is limited by the cost of protecting the items, the degree of success in protecting against deterioration, and the handling facilities.

"There is no limit to what can be stored outdoors providing enough money is spent for protective material. We have the know how to do the job. However in a business that operates for profit, there are definite limits to the amount that can be spent.

"The extent to which outdoor storage can be engaged in depends on the success we have in developing cheap methods of storing the articles to be protected. Handling facilities and the storage area are also important factors in outdoor storage. Fork trucks, straddle trucks, boom cranes and trailer trains are necessary equipment in an extensive storage for economical handling. The storage area should be as accessible and as close to the departments using the material as possible. It should be well lighted, drained and hard surfaced. All material should be on location."

Wier, also commenting on equipment, described the Timken operation: "Essentially, yard handling at Timken consists of moving steel from one mill to another and of providing outside storage between operations. A fleet of straddle carriers serves two plants three miles apart. In addition, outdoor fork trucks perform lifting operations partly to supply special mill functions and partly in the storage areas. At present, these areas approximate 23 acres. The system also includes two-way radios and other features."

Equipment Reviewed

Equipment costs and applications, regular conference subjects, came in for reappraisal. Speakers on a panel on "How to Get the Most for Your Equipment Dollar" were C. H. Wolf, supervisor, Materials Handling Engineering, Dow Chemical Co.; D. L. Salinger, director, Industrial Division, Walter E. Heller and Co.; and G. E. McNeive, superintendent of materials handling and production control, General Motors Truck and Coach Division.

Speaking on selection, Wolf outlined the classes of materials handling equipment and outlined a few basic rules. These are:

"(1) Gravity is the most economical motive force we can employ.

"(2) Equipment built for motion should be kept in motion—idle equipment is expensive.

"(3) Continuous movement of material is more economical than intermittent movement.

"(4) Handling cost is generally proportional to the size of load handled."

Salinger covered the financial aspects of acquiring equipment. Current finance methods include: cash purchase, bank loan, debenture funds, preferred stock, finance through suppliers, and leasing.

Equipment Replacement

"Equipment replacement," Mc-Neive said, "creates a definite challenge to the materials handling man. How can a materials handling organization, 'Make Equipment Replacement Pay-off?' The only answer that can be given is, some type of an equipment replacement program must be used." The basic requirements are, according to the speaker: A knowledge of the handling operations; a method to determine costs of these operations; a systematic method for replacing obsolete equipment; a communications system to inform management of gain derived from new equipment; an approach to sell management on providing funds by showing concrete savings that could never be derived from the present equipment; and a periodic presentation to management of results of the replacement program.

Planned utilization was discussed

by S. H. Isaacs, of Samuel Henry Isaacs Associates. Equipment use must be planned, personnel trained, a control method instituted, and adequate communications provided to reach from top management to operators.

Better Maintenance

J. J. MacDonald, manager, manufacturing engineering, Home Heating and Cooling Department, General Electric Co., spoke on better maintenance control.

"Trends in the utilization and maintenance of materials handling equipment are moving in the direction of greater acceptance by industry," MacDonald said. "The benefits are proven by the experience of many diversified industries . . . operating under various . . . programs."

Relating communications to maximum usage, W. W. deWitt, materials control area supervisor, Rohm and Haas Co., Bristol, Pa., cited benefits gained by his firm.

Savings at the Bristol plant through two-way radio are twice the estimated \$12,000 per year that was figured before the installation. Of the current savings, \$15,000 is in labor, \$4000 clerical, and \$5000 in repairs and depreciation.

Travel time and delay in communicating with the operators of equipment have been reduced. Several assignments have been combined to reduce dead-heading. Safety has been promoted through periodic checks on operators.

Training Program

Betty Duval, manager of training, Radio Corp. of America, spoke on the value of a training program

"The benefits to industry are quite far-reaching. As materials handling starts at the source of supply and ends with final distribution of products, the field of interest covers a large area. The many functions of handling all benefit from an adequate training program."

R. C. Waehner, general manager, Distribution Division, Lever Brothers Co., cited an example of the development of automation beyond the production lines by his company.

"Our Hammond Plant Warehouse is a good example of carrying automation through to the eventual shipping platform. All goods move from the case sealer by means of two common conveyors, directly into the storage warehouse. Within the warehouse, electronic case selectors automatically divert each pack and brand to separate accumulator belts to await their turn for automatic palletization."

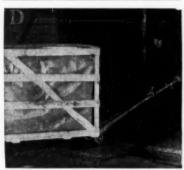
Beyond Production

George W. Jernstedt, director of manufacturing engineering, Westinghouse Electric Corp., also mentioned automation as a technique for wide application.

"In planning our development work to improve the state of automation in a plant we stress that it is important to review all of the operations involved in the manufacture of your product. This involves looking beyond your actual plant—raw material, storing, shipping, and receiving.

"We emphasize in our divisions that we must look further back than just a raw material as it comes to our plant."

(Resume Reading on Page 40)



This Low-Cost Tool Moves Heavy Objects THE MICRO LEVER DOLLY . . .

Cuts moving time in half on large bulky items. Works singly or in pairs.

Position of wheels permits the ilft blade to pry under objects that to the floor.

High leverage ratio between power and load.

No danger of tip-ups and talls.

Thousands in use in warenouses, terminals, factories. Choice of metal or rubber wheels.

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Magcoa dockboard Span-Locks*



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Fast easy to use

Span-Locks end all board slippage

MAGCOA DOCKBOARDS-

- Lightweight . . . yet strong
- Easy to position—no strain
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MAGCOA SPAN-LOCKS-

- Make your board completely safe
- Fully adjustable to any span
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For full details "Patent Pending use the coupon below.

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EASY TO ASSEMBLE IN SECONDS BY ONE MAN . . . JUST SNAP ON YOUR PRESENT PALLETS!

The TIER-RACK system consists of a set of 2 identical, interchangeable frames that easily snap on your standard wood pallets and lock into place. There are no "rights" or "lefts", no nuts, bolts, extra hardware or special attachments.

TIER-RACKS eliminate damage by compression . . . Allow selectivity in order picking without disturbing load above . . . Are ideal for palletizing irregular shaped items, or production work-in-process.

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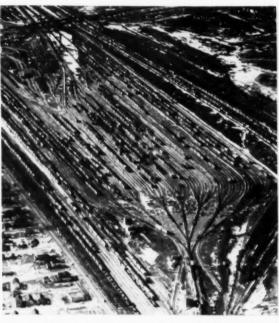


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TIER-RACK SOUTHERN CORPORATION 855 AVENUE OF THE AMERICAS, NEW YORK, N. Y. ALSO ELLIJAY, GA.

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New Electronic Railroad Yard



New York Central System recently completed a new yard at Buffalo, N. Y., which is able to receive and switch 3,000 cars a day. Power operated switches permit uninterrupted movement of trains. The "hump" of the \$10-million electronic yard is in the foreground

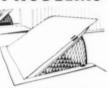
LOADING DOCK PROBLEMS?

easy ways to solve them
— and most economically, too!



10-ton capacity

Practically no maintenance! Rite-Hite precision counterbalanced design eliminates troublesame cylinders, pumps, motors, starters, piping, valves, wiring, gears, cables. Rite-Hites are not affected by dirt, debris, extreme heat or cold. Easy to install—furnished complete, no "extras." to buy. All-welded heavy steel construction. You can be sure, when it's a Rite-Hite, it's right. Get full details—write Dept. D-67.



RECESSED RAMPS wastandard, 60" x 60" and 22" x 72". Two flush-type, 22" x 72" and 96" x 72".



SELF-CONTAINED RAMP For non-permanent installations, 72" x 72".



TRUCK-ACTUATED RAMPS Two models, recessed and self contained, 96" x 72".



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Within the





By Leo T Parker Legal Consultant, Distribution Age

WAREHOUSING

Recently, higher courts in different states rendered several outstanding and particularly unusual decisions involving various subjects of warehouse law. Knowledge of these decisions should help readers avoid similar expensive law suits. Also the new decisions can be used by readers and their lawyers to win unavoidable suits.

When is a warehouseman subject to wage regulations of the Fair Labor Standards Act?

A reader writes, "I operate three warehouses, one of which does 61 percent interstate business, but all three warehouses do only 58 percent interstate business. Must I pay wages specified by the Fair Labor Stanards Act to employes who work in the warehouse which does 61 percent interstate business?"

A higher court case decided only a few months ago holds that if your three warehouses are operated from a common source, all employes in the three warehouses are exempt from the Fair Labor Standards Act.

For illustration, in Secretary of Labor v. B—— Van & Storage Co., 231 Fed. Rep. (2d) 25, the testimony showed facts, as follows: The B—Van & Storage Co. operated five scattered warehouses in Los Angeles as a unit. Central control was at one of the warehouses. More than half of the total business of the five warehouses was intrastate..

However, there was a high percentage of interstate business at one of the warehouses, known as the A—warehouse. The company pays its employes at its A—warehouse on a basis of 48 hours per week without overtime for work in excess of 40 hours per week.

The Secretary of Labor says this is wrong. He seeks overtime pay for the employes at this one warehouse because of its high percentage of interstate business.

Counsel for the company argued that the latter is not subject to the

Fair Labor Standards Act in any of its warehouses. He claimed that the A—warehouse is one of five scattered warehouses in downtown Los Angeles, which it operates as a unit, and that the majority of the business of all the warehouses is in intrastate commerce.

The higher court agreed with this argument. The court held that the employes in the A—— warehouse are not within the scope of the Fair Laoor Standards Act. This court said:

"It does not seem unreasonable to consider the five warehouses, generally in downtown Los Angeles within a limited radius, as one establishment. The decision here is simply that it is possible for one business located in several buildings, neither contiguous nor widely scattered, to be one establishment."

For comparison, see P——, Inc. v. W——, 324 U. S. 490. That was the case of overtime pay under the Fair Labor Standards Acts for the warehouse employes in one warehouse which received groceries in interstate commerce and distributed them to some of the company's chain stores in Massachusetts and Connecticut.

The wage provisions of the Federal

Fair Labor Standards Act were held to be applicable and the employes must be paid wages specified by the Fair Labor Standards Act. However, in this case the function historically had been that of independent wholesalers or wholesalers independent of retail grocers.

In other words, the effect of the Fair Labor Standards Act was not avoided by the company setting up of an "integration" of wholesale and retail functions.

How does negligence rule an injured employe's claim under the State Compensation Act?

As previously explained in these pages a warehouse employe may recover compensation under the State Workmen's Compensation Act irrespective of whether the injury was sustained through his negligence. This is so because the laws of various states are designed to provide reasonable payments to employes during the period of their inability to perform their regular and usual services.

However, when an injured employe sues an employer, or other person for damages, the employe never can recover a favorable judgement unless he convinces the jury that his injury did not result from his own negligence, but actually resulted from negligence of the party being sued.

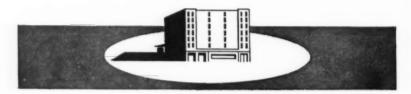
For example, in L—v. The X—Railroad Co., 132 N. E. (2d) 160, testimony showed that one L—, was employed as a truck driver by a transportation company. One day L—was seriously injured when he walked into an opening on a warehouse platform on a railroad's premises.

He sued the railroad company for heavy damages on the contention that the latter was negligent in having such dangerous openings on its platform. Testimony showed that the space or opening was obvious to any visitor, and further that L—had long known of its existance.

The higher court refused to hold L—entitled to recover damages from the railroad company.



Warehouse SPOTLIGHT



Colorado Warehousemen Elect

Lynn Johnson, of Package Delivery, was elected president of the Colorado Transfer and Warehousemen's Association, Inc., during the organization's recent annual meeting.

Other officers are Hubert Work, of Weicker Transfer and Storage Co., vice president; L. D. Galvin, Rocky Mountain Warehouse Corp., treasurer; and Helen Fisher, secretary.

In addition to Johnson, Work, and Galvin, the board of directors will include James A. Duffy, of Duffy Storage and Moving Co., chairman; Harry Berman, Amick Transfer and Storage Co.; Cecil Knox, Acme Delivery Service; and J. G. Murray, North Denver Transfer and Storage Co.

New Trademark



A program for restyling the design of its vans and trademark has been announced by United Van Lines, of St. Louis. The first of the redesigned vans was unveiled recently. It is expected that more than 600 pieces of equipment will be converted. The revised trademark, which is the central theme of the design, consists of a large blue bull's-eye which is outlined in black. Superimposed on the eye is a white map of the United States. Traveling around the eye, in opposite directions, are two black arrows.

Wisconsin Warehousemen Meet

The Wisconsin Warehousemen's Association held its 34th Semi-Annual Meeting May 15 at Madison, Wis.,

Harold M. Willenson, president, led the general sessions. Divisions meeting were presided over by Raymond J. Laubenstein, Merchandise; Chester P. Rookey, Household Goods, and Maurice West, Cold Storage.

The 1957 legislative program was discussed by Byron C. Ostby, Association counsel. C. W. Chamberlain, assistant director of sales training for the Clark Equipment Co., was a luncheon speaker. Matthew Zendzian, president of Zendzian, Inc., Milwaukee, discussed "Insurance — Too Little or Too Late?"

--- DA---

Schwartz New President Of N. J. Merchandise Group

Paul Schwartz, of Commercial Warehouse, became president of the New Jersey Merchandise Warehousemen's Association, Inc., during the group's annual meeting.

Anthony Christiano, Lehigh Warehouse and Transportation Co., is vice president; Gavin Moffatt, Essex Warehouse Co., treasurer; and Robert A. Roman, Wheeling Transportation Co., Inc., secretary. Directors elected were R. H. Daut, Harborside Warehouse Co., Inc.; J. Steinhauer, S and F Warehouse Co.; and T. B. McCarey, Mid-Hudson Warehouse Co.

Men in the Spotlight

Richard F. Cadorette—new assistant general traffic manager, North American Van Lines, Inc., Fort Wayne, Ind.

James C.
Connell — named vice president and general manager, Atlas Van Lines, Chicago, Ill.



John F. O'Halloran—new executive vice president, Wiggin Terminals Inc., Boston, Mass. Mr. O'Halloran and Paul Whipple, vice president, will take over the duties of Christopher J. Grimley, former vice president.





Richard E. Huggins, Charles W. Hulett, and Rufus W. Mumford, Sr. (l. to r.) named vice presidents, Aero Mayflower Transit Co., Indianapolis.



Frederick C.
Witham — named
manager, Warehouse No. 5,
Northwestern
Transfer Co.,
Portland, Ore.

W. Neil Conaster—named Cleveland sales office manager, Aero Mayflower Transit Co.

C. William Cubberly—elected vice president, Manning Warehouse Corp., Trenton, N. J. Bernard J. McClain named secretary.

Harry Lee
McPherson—
elected president,
Southern Bonded
Warehouse, Inc.,
Atlanta, Ga., and
Birmingham, Ala.



Ralph E. Hertel—named general manager of the D. H. Overmyer Warehouse Co. branch at Newark, N. J., succeeding Daniel Shapiro, who will take on a new assignment in the organization. Leonard J. Monohon—promoted from office manager at the Toledo, Ohio, branch to general manager at Jacksonville, Fla.

J. William Kennedy—new manager of public relations for North American Van Lines, Inc., Fort Wayne, Ind.

Eldon R. Clawson—appointed assistant general counsel, Bekins Van and Storage Co., Los Angeles.

Christopher J. Grimley—named general manager, National Dock & Storage Warehouse Co., Boston, Mass.

U. S. to Japan Service

Military personnel now can ship household goods by van between the United States and Japan or Okinawa through Allied Van Lines. The agent at the point of origin will do the preliminary packing and transport the goods in highway van to the port of embarkation. The port-handling a gent inventories the shipment and loads it into a sea-van container. After customs clearance, the port agent moves the sea-van to the pier.

Warehouse Briefs

The Roederer Transfer & Storage Co., Davenport, Ia., recently celebrated its 30th Anniversary with a dinner for employes and guests.

Allied Van Lines, Broadview, Ill., will conduct its Annual Convention July 17-19 at the Drake Hotel, in Chicago.

A 60,000-sq ft bonded merchandise warehouse was opened last month in Peoria, Ill., by General Warehouse & Transportation Co. The new warehouse is the latest of 10 now operated by General. It is served by the Toledo, Peoria & Western Railroad, and features storage in transit. William A. Clark has been named Peoria regional manager.

Bekins Van & Storage Co. has announced election of the following officers: Daniel P. Bryant, president; Robert J. Burwell, vice president and general manager; Herbert B. Holt, vice president; Lucien W. Shaw, vice president and secretary; Dilworth S. Wooley, vice president; J. W. Kendall, vice president; Robert C. Johnson, treasurer.

Newly elected members of the Board of Governors of the American Chain of Warehouses, Inc., include: L. M. Ashenbrenner, Toledo; W. G. Coffin, Phoenix; Vernon Curnow, Denver; T. L. Hansen, Milwaukee, and W. H. Kinnaird, Louisville.

Form National Network

Five independent refrigerated warehousing companies have joined in a nation-wide network to be known as Trans-American Refrigerated Services Ltd.

Member companies are Merchants Refrigerating Co., New York; Quincy Market Cold Storage and Warehouse Co., Boston; Continental Freezers of Illinois, Inc., Chicago; Wisconsin Cold Storage Co., Milwaukee; and Terminal Ice and Cold Storage Co., Portland, Ore.

Associated Honors Phelps



Associated Warehouses, Inc., of Chicago, paid special tribute to Executive Vice President Clyde E. Phelps at its recent Annual Meeting in Atlantic City. The above picture was taken at the Annual Dinner. Mr. Phelps was honored at the dinner for his 20 years of service with AWI. Some 90 members and guests attended, which made it the largest dinner in the history of the association.

Carr Re-elected President Of Canadian Warehouse Assn.

Ernest P. Carr, of Toronto, was re-elected president of the Canadian Warehousemen's Association for the 1957-58 term.

Carr was returned to office during the CWA's 37th Annual Convention held at Harrison Hot Springs, B. C., last month. He is the winner of the CWA Award of Merit for 1954. This award was made in recognition of his organizing a University of Toronto Extension Course in Warehousing and Distribution.

California Movers Hold 39th Annual Convention

A record breaking attendance was achieved by the California Moving and Storage Association during its recent 39th Annual Convention in Palm Springs.

John Carlson, of Tri-City Van and Storage Corp., was elected president; James A. Nevil, of Nevil Storage Co., became vice president and Orville K. Ferry, Republic Van and Storage Co., is the new secretary-treasurer.

The theme was "Ethical Practices and Good Management."

Loading Dock Expansion



Lehigh Warehouse & Transportation Co., Newark, N. J., recently completed modernization of its dock loading area at 98-108 Frelinghuysen Ave. The 210 by 180 ft area was redesigned to speed trailer turn-around time. Black-top paving was laid and a new lighting system installed. The dock now can spot 14 tractor-trailers at one time

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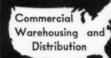
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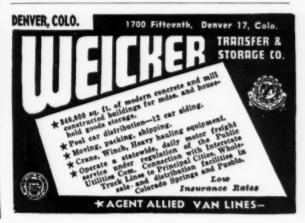
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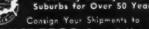
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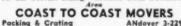
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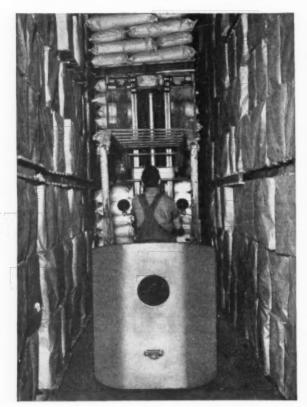
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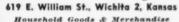
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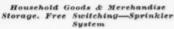
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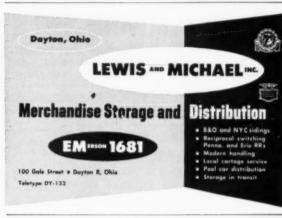
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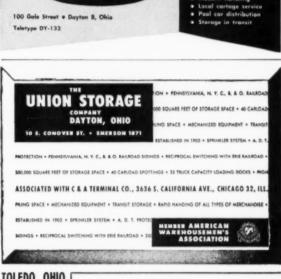
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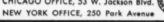
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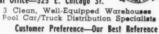
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Men in the News

(Continued from Page 15)

Edmund Stohr-becomes European director for United Air Lines with offices in London.

Maurice B. Westphal-promoted to manager of the Atlantic Div. of Eastern Air Lines with headquarters in New York.

Frank H. Sheldon-newly appointed director of contract sales, Slick Airways, Dallas.

-Highway

Cabell Cornish—new vice president and director of operations, Ryder System, Inc., Miami, Fla.

E. W. Jolly-named truck fleet sales manager, GMC Truck & Coach Div., Pontiac, Mich.

Harry Randall-named Detroit terminal manager, Denver-Chicago Trucking Co.

William L. Peterson-new director of sales promotion and advertising, White Motor Co., Cleveland, O.





W. Stanhaus (left)-named president, and Cecil Vernon (right)named executive vice president of the newly organized Spector-Mid States, Chicago.

Edward Minick - becomes district manager of the Middle Atlantic District, Spector Freight System, Inc. He will supervise terminals in Bridgeport, Conn., New York, Union, N. J., Philadelphia, and Baltimore-Washing-

District managers for the three newly-established Tanker Division territories for Pacific Intermountain Express are: E. L. Kendall-Northwest, Portland, Ore.; K. P. Reilley-Southern, Los Angeles; and E. H. Harwood -Intermountain, Salt Lake City.

Harold Foth - appointed national accounts representative, Denver Chicago Trucking, Inc., in the greater New York area.

George E. Powell, Jr .- elected president, Yellow Transit Freight Lines, Kansas City, Mo. succeeding George E. Powell, Sr .- new chairman of the Board.

Ray A. Peterson-promoted to vice president in charge of sales and traffic, Ringsby Truck Lines, Inc., Denver, Colo.

Harry J. Carroll-elected vice president of national accounts sales, Roadway Express, Inc., Akron, Ohio.

Arthur J. Parker-promoted to district sales manager, Denver-Chicago Trucking Co., Detroit.

-Rail

James F. Nellis-appointed general manager, Wabash Railroad Co., St. Louis, Mo.

Charles E. Ragland-elected vice president in charge of traffic, Monon Railroad, Chicago.

George E. Dove-named manager, Railroad Trailer Service, Baltimore & Ohio Railroad Co., Baltimore, Md. M. L. Mollman - named general freight agent in Baltimore.

Frederick M. Klitz - named New York freight traffic manager, Erie Railroad.

William Swindells-elected a director, Southern Pacific Co., San Francisco, Calif.

George S. Eccles-Oscar T. Lawler Harold B. Lee-Elbridge T. Gerry new directors of Union Pacific Railroad, Omaha. Donald R. Alexanderdirector of sales relations and Joseph C. Beaumont - new traffic manager for Union Pacific.

Sam Laud - elected chairman and Lester N. Selig, chairman of the Executive Committee, General American Transportation Corp., Chicago.

James E. Gardner - promoted to coal traffic manager, Illinois Central Railroad at Chicago. Homer F. Wilson-new superintendent of transportation.

Charles R. Martin - promoted to assistant vice president for traffic in the central region, Erie Railroad, Cleveland.

Walter J. Little-elected vice president, Association of American Railroads, Washington, D. C.

-Water

Charles M. Trammel, Jr. - appointed assistant counsel, St. Lawrence Seaway Development Corp., Washington, D. C.

James Campbell - named foreign trade operations manager, The Board of State Harbor Commissioners for the Port of San Francisco.











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Member Wis. W.A.

James A. Hoyt, Jr .- named assistant to the president, Grace Line, New York City.

Materials Handling

Wallace Collett-appointed product sales manager, Materials Handling Dept., Tractor Group, Allis-Chalmers Mfg. Co., Milwaukee, Wis.

L. A. DePolis—named director of sales, and Bert E. Phillips—named sales manager, Industrial Truck Div., Clark Equipment Co., Battle Creek 11, Mich.



Bert M. Walter (left) and George Turner (right)-elected vice presidents, Clark Equipment Co., Battle Creek, Mich.





Odd H. McCleary (left) - elected president, and L. T. Sylvester (right) —named chairman of the Board, Mathews Conveyor Co., Elwood City,

Bartlett Richards-appointed vice president and presidential assistant, Harry R. Sanow-vice president of Riverdale Operations, and Joseph H. Myers - general superintendent of Riverdale Plant for Acme Steel Co., Chicago.

L. C. Daniels—new general manager, Buda Div., Tractor Group, Allis-Chalmers Mfg. Co., Milwaukee, and Owen J. Higgins-new general manager Harvey, Ill., works.

CANADA

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IN THE EXACT CENTER OF THE CITY OF MONTREAL
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NEW YORK, N. Y.

K. K. Stonebraker-appointed sales manager of Transporter line, Automatic Transportation Co., Chicago.

Steve Ragsdale-appointed manager, Materials Handling Development Center, Clark Equipment Co., Battle Creek, Mich.



George G. Raymond, Jr., (left) president of The Raymond Corp., named president, and Robert L. Fairbank, vice president of Towmotor Corp., named first vice president. The Materiel Handling Institute, Inc.

(Resume Reading on Page 25)

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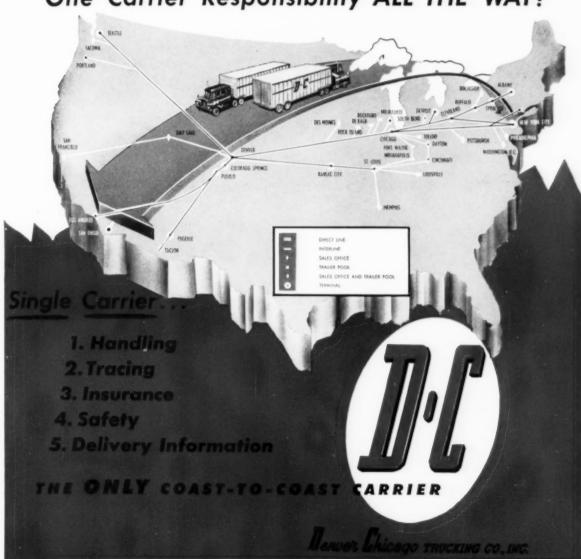
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MAXIMUM HEAT PROTECTION. CLASS H. SILICONE INSULATED MOTORS—ALL MODELS	Yes	No	No	No

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